

**BellSouth Telecommunications, Inc.** 

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General Counsel

November 13, 2000

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Guy M. Hicks

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## VIA ELECTRONIC MAIL

David Waddell, Executive Secretary Tennessee Regulatory Authority 460 James Robertson Parkway Nashville, TN 37238

Re:

Generic Docket to Establish UNE Prices for Line Sharing per FCC 99-355 and Riser Cable and Terminating Wire as Ordered in TRA Docket No. 98-00123

Docket No. 00-00544

Dear Mr. Waddell:

Enclosed are electronic versions of the Direct Testimony of the following witnesses:

John Ruscilli Daonne Caldwell Keith Milner Ronald Pate

The original and 13 copies will be hand delivered to the Authority today. Pursuant to the agreement of the parties, copies of the enclosed are being provided to counsel of record for all parties electronically and by mail, with the exception of Exhibit 1 to Daonne Caldwell's testimony. Caldwell Exhibit 1 is a cost study comprised of both a paper document of approximately 200 pages and a CD Rom. That exhibit is being hand delivered or faxed (as appropriate) to counsel of record.

Guy M. Hicks

GMH:ch Enclosure

## **CERTIFICATE OF SERVICE**

I hereby certify that on November 13, 2000, a copy of the foregoing document was served on the parties of record, via electronic mail and the method indicated below:

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1		BELLSOUTH TELECOMMUNICATIONS, INC.
2		DIRECT TESTIMONY OF JOHN A. RUSCILLI
3		BEFORE THE TENNESSEE REGULATORY AUTHORITY
4		DOCKET NO. 00-00544
5		NOVEMBER 13, 2000
6		
7	Q.	PLEASE STATE YOUR NAME, YOUR POSITION WITH BELLSOUTH
8		TELECOMMUNICATIONS, INC. ("BELLSOUTH") AND YOUR BUSINESS
9		ADDRESS.
10		
11	A.	My name is John A. Ruscilli. I am employed by BellSouth as Senior Director for
12		State Regulatory for the nine-state BellSouth region. My business address is 675
13		West Peachtree Street, Atlanta, Georgia 30375.
14		
15	Q.	PLEASE PROVIDE A BRIEF DESCRIPTION OF YOUR BACKGROUND
16		AND EXPERIENCE.
17		
18	A.	I attended the University of Alabama in Birmingham where I earned a Bachelor of
19		Science Degree in 1979 and a Master of Business Administration in 1982. After
20		graduation I began employment with South Central Bell as an Account Executive in
21		Marketing, transferring to AT&T in 1983. I joined BellSouth in late 1984 as an
22		analyst in Market Research, and in late 1985 moved into the Pricing and Economics
23		organization with various responsibilities for business case analysis, tariffing, demand
24		analysis and price regulation. I served as a subject matter expert on ISDN tariffing
25		in various commission and public service commission ("PSC") staff meetings in
		Tennessee, Florida, North Carolina and Georgia. I later moved into the State

1		Regulatory and External Affairs organization with responsibility for implementing both
2		state price regulation requirements and the provisions of the Telecommunications Act
3		of 1996 ("the Act"), through arbitration and 271 hearing support. In July 1997, I
4		became Director of Regulatory and Legislative Affairs for BellSouth Long Distance,
5		Inc., with responsibilities that included obtaining the necessary certificates of public
6		convenience and necessity, testifying, Federal Communications Commission
7		("FCC") and PSC support, federal and state compliance reporting and tariffing for
8		all 50 states and the FCC. I assumed my current position in July 2000.
9		
10	Q.	WHAT IS THE PURPOSE OF YOUR TESTIMONY?
11		
12	A.	The Tennessee Regulatory Authority ("Authority") opened this docket to establish
13		rates for certain unbundled network elements ("UNEs"). My testimony addresses
14		the policy issues related to the cost studies and price development for the UNEs that
15		BellSouth offers to Competitive Local Exchange Carriers ("CLECs") outlined by the
16		FCC in its Third Report and Order in CC Docket No. 96-98, Implementation of the

17 Local Competition Provisions of the Telecommunications Act of 1996, issued

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19 Docket No. 98-147 and Fourth Report and Order in CC Docket No. 96-98 ("Line

Sharing Order"). The following areas are discussed in my testimony: 1) the policy

foundations underlying the proposed rates; 2) the effect of the proposed rates on

November 5, 1999 ("UNE Remand Order") and its Third Report and Order in CC

implementation of those policies; and 3) the development of the proposed rates.

24 Q. GENERALLY, WHAT IS THE PURPOSE OF THIS PROCEEDING?

A. The FCC's UNE Remand Order identified additional UNEs that must be offered to

1		CLECs and the Line Sharing Order identified the high frequency portion of the loop,
2		also referred to as line sharing, as a new UNE. Also, pursuant to the requirements
3		of FCC Rule 51.507(f), state commissions must establish different rates (prices) for
4		certain UNEs in at least three cost-related rate zones within the state to reflect
5		geographic cost differences. Therefore, the primary goal of this proceeding is to
6		establish rates (including geographically deaveraged rates where appropriate) for the
7		additional UNEs that the FCC identified in its UNE Remand Order and its Line
8		Sharing Order. The rates the Authority establishes is this proceeding will replace,
9		subject to true-up, the interim rates that the Authority has previously established.
10		
11	Q.	BRIEFLY DESCRIBE THE COST STUDIES BELLSOUTH IS SUPPORTING
12		IN THIS PROCEEDING.
13		
14	A.	In Docket No 97-01262, the Authority instructed that various adjustments be made
14 15	A.	In Docket No 97-01262, the Authority instructed that various adjustments be made to the Total Element Long Run Incremental Cost ("TELRIC") initially filed by
	A.	
15	A.	to the Total Element Long Run Incremental Cost ("TELRIC") initially filed by
15 16	A.	to the Total Element Long Run Incremental Cost ("TELRIC") initially filed by BellSouth. BellSouth's witness Ms. Daonne Caldwell sponsors the cost studies that
15 16 17	A.	to the Total Element Long Run Incremental Cost ("TELRIC") initially filed by BellSouth. BellSouth's witness Ms. Daonne Caldwell sponsors the cost studies that BellSouth filed on October 2, 2000 in this proceeding. As she explains in detail,
15 16 17 18	A.	to the Total Element Long Run Incremental Cost ("TELRIC") initially filed by BellSouth. BellSouth's witness Ms. Daonne Caldwell sponsors the cost studies that BellSouth filed on October 2, 2000 in this proceeding. As she explains in detail, these studies are based on forward-looking economic costs, and the same
15 16 17 18	A.	to the Total Element Long Run Incremental Cost ("TELRIC") initially filed by BellSouth. BellSouth's witness Ms. Daonne Caldwell sponsors the cost studies that BellSouth filed on October 2, 2000 in this proceeding. As she explains in detail, these studies are based on forward-looking economic costs, and the same adjustments previously ordered by the Authority have been incorporated into these
15 16 17 18 19	A. Q.	to the Total Element Long Run Incremental Cost ("TELRIC") initially filed by BellSouth. BellSouth's witness Ms. Daonne Caldwell sponsors the cost studies that BellSouth filed on October 2, 2000 in this proceeding. As she explains in detail, these studies are based on forward-looking economic costs, and the same adjustments previously ordered by the Authority have been incorporated into these
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115 116 117 118 119 20 21		to the Total Element Long Run Incremental Cost ("TELRIC") initially filed by BellSouth. BellSouth's witness Ms. Daonne Caldwell sponsors the cost studies that BellSouth filed on October 2, 2000 in this proceeding. As she explains in detail, these studies are based on forward-looking economic costs, and the same adjustments previously ordered by the Authority have been incorporated into these studies.  WHAT RATES (RECURRING AND NON-RECURRING) DOES
15 16 17 18 19 20 21 22 23		to the Total Element Long Run Incremental Cost ("TELRIC") initially filed by BellSouth. BellSouth's witness Ms. Daonne Caldwell sponsors the cost studies that BellSouth filed on October 2, 2000 in this proceeding. As she explains in detail, these studies are based on forward-looking economic costs, and the same adjustments previously ordered by the Authority have been incorporated into these studies.  WHAT RATES (RECURRING AND NON-RECURRING) DOES

1		TELRIC (based on the efficient network requirement) plus, (2) a reasonable
2		allocation of forward-looking common costs. BellSouth, however, continues to
3		maintain that the FCC's pricing rules do not permit full cost recovery. The rates
4		BellSouth proposes are contained in Exhibit JAR-1 attached to my testimony.
5		Exhibit JAR-1 contains BellSouth's proposed rates for the additional UNEs that
6		resulted from the FCC's UNE Remand and Line Sharing Orders. The cost study
7		reference number is provided with the description of the corresponding rate element.
8		
9	Q.	HOW WILL THE PRICES ESTABLISHED IN THIS PROCEEDING AFFECT
10		THE DEVELOPMENT OF LOCAL COMPETITION IN TENNESSEE?
11		
12	A.	The prices established in this proceeding will have profound effects on the continued
13		development of competition in Tennessee. The outcome of this docket will affect:
14		- the nature and extent of competition;
15		- how local competition will continue to develop;
16		- which companies will choose to participate;
17		- which customers will benefit from local competition;
18		- economic development and the availability of advanced
19		technologies.
20		
21		All of these issues will be significantly impacted by the Authority's decision in this
22		proceeding.
23		
24	Q.	PLEASE BRIEFLY COMMENT ON HOW PRICES FOR UNES AND
25		INTERCONNECTION SERVICES AFFECT THE ISSUES IDENTIFIED
		ABOVE.

1		
2	A.	In order to maintain an environment in which efficient competition will occur and
3		provide the maximum benefit to consumers, local competition must be implemented
4		in a fair and balanced manner. If prices for UNEs and interconnection services are
5		set either too high or too low then:
6		- new investment will not materialize and economic development
7		will be thwarted;
8		- market entry and investment decisions of competitors, including
9		BellSouth, will be distorted;
10		- the development of efficient competition in the local market, as
11		intended by Congress, will not prosper, and
12		- such incorrect pricing will not, in the long run, benefit the
13		consumer.
14		
15	Q.	HOW WILL INCENTIVES TO INVEST IN NEW TECHNOLOGY BE
16		AFFECTED BY PRICES THAT ARE NOT JUST AND REASONABLE?
17		
18	A.	Generally, incentives to invest in new technology are reduced if prices for UNEs and
19		interconnection services are not just and reasonable. As explained further below,
20		such incentives to both CLECs and Incumbent Local Exchange Companies
21		("ILECs") are reduced.
22		
23		One consequence of establishing prices that are not just and reasonable is that such
24		pricing causes inefficient decisions. Prices that are understated deter the ILEC from
25		undertaking investments because it guarantees that the costs of those investments will
		not be recovered. An ILEC only has an obligation to unbundle its existing network.

If UNE prices are too low, investment decisions associated with expanding or upgrading that network become more speculative. Accordingly, incentives to expand that network into new areas and upgrade it with new technology are reduced. Where UNEs are available, CLECs will over-consume the ILEC's facilities and under-invest in their own facilities, even when investing in their own facilities is the efficient choice.

Another consequence of inadequate UNE prices is that it results in inefficient entry of CLECs into the local market by placing all of the risks of building and maintaining a network on the ILEC. In effect, the CLECs get a "free ride" on BellSouth's network without having to make any substantial investment or commitment. While CLECs have the option to use the ILEC's facilities for the economic life of those facilities, CLECs don't have to. The CLEC can utilize BellSouth's facilities for a limited period, e.g., until the CLEC builds its own facilities to serve a customer. Since BellSouth established the facilities, however, BellSouth must recover its costs whether a CLEC uses the facilities or not. Any costs not recovered from the CLEC who caused the costs become a burden upon BellSouth's end users. If prices are not set to cover costs, then CLECs don't bring to the marketplace anything more than an arbitrage mechanism. This arbitrage allows them to avoid paying the costs they would otherwise have to pay in a competitive marketplace. End user customers are ultimately the losers in this arrangement.

Q. ARE THERE ANY OTHER ASPECTS TO THIS RATE-SETTING
PROCEEDING OF WHICH THE AUTHORITY SHOULD BE AWARE?

A. Yes. Another troublesome outcome of setting prices too low would be the

marginalization of the ILEC. As discussed later in my testimony, marginalization occurs as a result of price differences between rural residential and urban businesses. The prices of the latter have historically subsidized the high cost of providing service to the former, serving public policy purposes to ensure affordable local service for all consumers. Setting UNE and interconnection services prices at unreasonably low levels will hinder BellSouth's ability to compete because the CLECs will have an artificial pricing advantage over BellSouth. The CLEC will, therefore, be in a better position to "cherry pick" the more profitable, mainly business customers, and the ILEC will lose the low cost, high margin, urban customers to competition. The ILEC will be left to serve the high cost, low (or negative) margin, rural customers. Ultimately, since only the low margin customers will be left to cover the full cost of the network, prices for these predominantly rural customers would have to increase.

Q. PLEASE EXPLAIN FURTHER HOW INADEQUATE UNE PRICES AFFECT RETAIL PRICES.

A.

If the prices of the services provided to competitors do not cover the costs of providing the services, BellSouth's retail customers and shareholders will end up subsidizing its competitors. In that event, BellSouth must attempt to recover certain wholesale costs through its retail prices. Unfortunately, however, attempts to recover the shortfall in this manner will ultimately be unsuccessful and BellSouth will have no choice but to recover the shortfall from its retail customers. The competitor who is using the subsidized facilities will not have to recover this shortfall through its retail prices. Hence, the competitor's prices will remain lower than the incumbent's retail prices. By partially utilizing a subsidy provided by BellSouth's retail customers and shareholders, the competitor can undercut BellSouth's retail prices. To respond

1		to this competitive pressure, BellSouth must lower certain retail prices, and attempt
2		to recover wholesale costs from a smaller group of retail customers. The result is
3		that this subsidy to competitors would ultimately be borne by those end users that
4		have the fewest competitive options, e.g., rural residential customers.
5		
6	Q.	WHAT ARE SOME OF THE CONSEQUENCES IF PRICES ARE SET TOO
7		HIGH?
8		
9	A.	As I mentioned earlier, the FCC's current pricing rules result in prices being
10		understated. Therefore, setting prices too high is not currently a condition the
11		Authority will encounter. Nonetheless, setting prices too high would result in
12		uneconomic decisions such as a CLEC constructing its own facilities (rather than
13		purchasing UNEs from the ILEC) when the CLEC is not the most efficient provider.
14		Of course, the result would be that infrastructure competition would develop sooner,
15		even though the CLEC may not be the most efficient provider.
16		
17		The ultimate goal is to establish prices that are neither too low nor too high; to do
18		otherwise will result in inefficient decisions, and, ultimately, consumers will suffer the
19		consequences. Again, however, given the current pricing rules, the Authority can
20		only minimize the extent to which prices are set too low.
21		
22	Q.	ARE THERE ANY UNIQUE CONCERNS SURROUNDING
23		NONRECURRING PRICES?
24		
25	A.	Yes. While all of the issues previously discussed apply both to recurring and
		nonrecurring prices, the impact of inappropriate nonrecurring prices is felt

1		immediately. Nonrecurring prices principally recover labor cost and direct expenses
2		incurred when a specific element or service is provisioned as the result of a service
3		order. These expenses are paid immediately by the ILEC. Thus, setting
4		nonrecurring prices too low will immediately begin to create the negative
5		consequences that I previously discussed. Consequently, the Authority should be
6		very careful to ensure that nonrecurring prices fully recover the cost that an ILEC is
7		expected to incur on a going-forward basis.
8		
9		In particular, the Authority should ensure that the obligations of the ILEC are
10		accurately reflected in the cost study. For example, BellSouth's nonrecurring costs
11		reflect the work times typically required to perform the various functions required to
12		provision a particular element. Therefore, if the Authority were to establish
13		performance requirements that require additional work activities, BellSouth's cost
14		studies would not accurately reflect its costs.
15		
16		Finally, nonrecurring costs should reflect the activities actually undertaken to provide
17		the element. For example, a new technology that <u>could</u> reduce nonrecurring costs
18		should only be used as a basis for prices to the extent that it will be actually used by
19		BellSouth to provide the element on a going-forward basis.
20		
21	Geogr	raphic Deaveraging
22	Q.	WHAT OBLIGATION DOES THE AUTHORITY HAVE TO ESTABLISH
23		GEOGRAPHICALLY DEAVERAGED RATES FOR UNBUNDLED
24		NETWORK ELEMENTS?
25		

The FCC's Rule 51.507(f) requires state commissions to establish different rates

A.

1 (prices) for elements in at least three cost-related rate zones within the state to reflect 2 geographic cost differences. With the November 2, 1999 release of the FCC's 3 Order in CC Docket No. 96-46, the stay of Rule 51.507(f) was lifted effective May 4 1, 2000. 5 PLEASE DISCUSS THE GENERAL POLICY CONSIDERATIONS 6 Q. 7 ASSOCIATED WITH GEOGRAPHIC DEAVERAGING OF UNES. 8 9 A. UNEs are generally used by CLECs to compete with services offered at retail rates 10 by incumbent local exchange carriers ("ILECs"). Consequently, the relationship between UNE rates and retail rates affects competitive development. Historically, it 11 12 has been the intent and practice of regulators to deaverage rates for basic service in 13 an inverse relationship to costs. For example, for basic residence local exchange 14 service in Tennessee, Rate Group 1 has the lowest rate, and Rate Group 5 has the 15 highest rate. The wire centers in Rate Group 1, however, are generally rural and 16 have much higher costs than the urban wire centers in Rate Group 5. Such pricing 17 practices served both regulatory and public policy purposes and incorporated implicit subsidies to ensure affordable local service for all customers. Conversely, 18 19 UNE prices are based on costs and will be geographically deaveraged in a direct 20 relationship to cost. 21 22 Geographically deaveraging UNE rates will result in a rate structure that is 23 inconsistent with the existing pricing practices for retail rates for basic local exchange 24 service as established by this Authority. The present rate structure in Tennessee

incorporates long-standing policies of purposefully pricing some services markedly

above costs in order to price other services, such as residential basic local exchange

service, at or below cost. Further, basic local exchange service rates have been established with a direct relationship to the number of lines in an exchange's local calling area – the greater the number of lines in a particular exchange's local call area, the higher the price for the basic service. Geographic deaveraging will create loop prices that vary inversely from the prices for retail services.

## Q. WHAT SHOULD THE AUTHORITY DO TO ADDRESS THE PROBLEMS DISCUSSED ABOVE?

A.

The Authority should encourage rate rebalancing and establish a universal service fund as quickly as possible. This is important because unbundled loops will be used by CLECs to compete for these retail customers. Geographically deaveraging loop prices would result in lower UNE loop prices in the urban area where retail prices are currently the highest. In rural areas, the reverse would be true. However, in rural areas, geographically deaveraged unbundled loop prices set high enough to cover costs would be irrelevant because the CLEC could simply resell the low priced retail service to rural customers. As a result, deaveraging, without concomitant rate rebalancing or creation of a state universal service fund, simply creates another opportunity for CLECs to engage in inappropriate arbitrage of the pricing schedule. This arbitrage will ultimately lead to higher prices for rural customers as CLECs usurp the contribution contained in the prices charged in urban areas that currently make lower rural prices possible.

It is very important to recognize that CLECs use unbundled loops to compete with residence and business retail local exchange services. As such, the pricing implications of geographically deaveraging the loop cannot be divorced from the

1		price of local exchange services.
2		
3	Q.	PLEASE EXPLAIN HOW BELLSOUTH DERIVED ITS PROPOSED
4		DEAVERAGED RATES.
5		
6	A.	The geographically deaveraged rates BellSouth proposes were derived using the
7		methodology adopted by the Authority in their decision of April 25, 2000, in Docket
8		No. 97-1262. In using the methodology adopted by the Authority, customers who
9		are located in the same geographic area and who have similar calling areas will be in
10		the same geographically deaveraged zone for UNE pricing. Utilizing local exchange
11		rate groups to define geographically deaveraged zones for UNEs meets the
12		requirements set forth by the FCC and provides consistency between the structure
13		of BellSouth's retail, resale and UNE rates. Further, "rate group-to-zone" mapping
14		best represents the competitive market environment in Tennessee, thereby promoting
15		competition in all areas of Tennessee.
16		
17	Q.	WHAT DOES BELLSOUTH PROPOSE AS ITS GEOGRAPHICALLY
18		DEAVERAGED RATES IN THIS PROCEEDING?
19		
20	A.	The geographically deaveraged rates being proposed by BellSouth are contained in
21		Exhibit JAR-1. Also, when deaveraging the loop/port combination, only the loop
22		component is deaveraged since switching (port) costs do not vary by geographic
23		location.
24		
25	UNE I	Remand Order Requirements

PLEASE BRIEFLY DESCRIBE THE FCC'S UNE REMAND ORDER.

Q.

1		
2	A.	As the result of a Court Remand, the FCC was required to review its previously
3		established national list of UNEs. The FCC was instructed to apply the "Necessary
4		and Impair Standards" of Section 251(d)(2) of the Act to determine which network
5		elements an ILEC must unbundle. The FCC's UNE Remand Order resulted from
6		this further review, and it provided a national list of network elements that ILECs
7		must unbundle and make available at cost-based rates for CLECs. The resulting list
8		is similar, but not identical, to the original UNE list. Generally, loops, subloops,
9		network interface devices (NIDs), circuit switching, interoffice transmission facilities,
10		signaling and call-related databases and operations support systems (OSS) must be
11		unbundled. However, certain network elements contained in the original UNE list no
12		longer must be unbundled. These items are operator services and directory
13		assistance (OS/DA), packet switching (per specified exemption) and circuit
14		switching (per specified exemption).
15		
16	Q.	WHAT IS THE RELEVANCE OF THE FCC'S UNE REMAND ORDER TO
17		THIS PROCEEDING?
18		
19	A.	As previously noted, this Authority is establishing permanent cost-based rates for
20		numerous UNEs in Docket No. 97-01262. Since the FCC has added some UNEs,
21		this Authority must establish permanent cost-based rates for these new UNEs. The
22		permanent cost-based rates that will be established in Docket No. 97-01262 are

25 Q. WERE ANY ADDITIONAL UNBUNDLED LOOP TYPES REQUIRED BY THE FCC'S UNE REMAND ORDER?

unaffected by the UNE Remand Order.

23

A. Yes. While the Authority is preparing to establish rates for numerous types of unbundled loops, the FCC's UNE Remand Order requires BellSouth to provide unbundled copper loops, dark fiber loops and unbundled loops at high capacity speeds such as DS3 and OC3. Because the Authority has not yet addressed prices for these types of loops, BellSouth proposes the rates contained on Exhibit JAR-1.

8 Q.

## WHAT IS THE BASIS FOR THE PRICES BELLSOUTH PROPOSES FOR PROVIDING UNE COMBINATIONS?

A.

Prices for the elements that comprise the UNE combinations that BellSouth makes available to CLECs when such combinations are currently combined will be established by the Authority. Some of the prices will be established by the Authority in Docket No. 97-01262 and some of the prices will be established in this proceeding. Exhibit JAR-2 attached to my testimony contains a chart that identifies the UNEs that are included in various UNE combinations along with the identification of the TRA docket number in which the rate will be established. As I will discuss in greater detail later in my testimony, BellSouth has elected to provide access to new enhanced extended loop ("EEL") combinations when specific circumstances exist so that BellSouth is not required to provide unbundled local switching. As such, BellSouth is proposing in this proceeding nonrecurring cost studies and prices for providing new EEL combinations. BellSouth's nonrecurring cost study for providing new EEL combinations was filed on October 20, 2000. The proposed recurring and nonrecurring prices for the UNE combinations being addressed in this proceeding are contained in Exhibit JAR-1.

1	Q.	PLEASE EXPLAIN WHY BELLSOUTH IS PROPOSING NONRECURRING
2		RATES FOR ADSL AND HDSL LOOPS IN THIS DOCKET WHEN RATES
3		FOR THESE LOOPS WERE ALREADY BEING CONSIDERED IN DOCKET
4		NO. 97-01262?
5		
6	A.	The nonrecurring rates BellSouth proposed in Docket No. 97-01262 for ADSL and
7		HDSL loops were based on a cost structure that only allowed for a manual service
8		inquiry process and assumed that loop makeup information would always be
9		required for xDSL loops. Since BellSouth's filing in Docket No. 97-01262,
10		BellSouth has implemented a mechanized provisioning process associated with its
11		xDSL loop offerings. As such, BellSouth will offer both a manual and a mechanized
12		provisioning process for service inquiry and access to loop makeup information.
13		
14	Q.	PLEASE EXPLAIN HOW RESTRUCTURING THE NONRECURRING
15		COSTS IMPACTS THE RECURRING RATES FOR XDSL LOOPS.
16		
17	A.	Because of the Authority's requirement that nonrecurring costs associated with
18		testing be recovered on a monthly recurring basis, the restructuring of the
19		nonrecurring ADSL and HDSL costs impacts the amount of nonrecurring testing
20		costs. Since the nonrecurring testing costs have decreased, the testing cost to be
21		included in the recurring rates for the ADSL and HDSL loops has also decreased.
22		As such, the proposed recurring rates for ADSL and HDSL loops being considered
23		in Docket No. 97-01262 should be modified to reflect the impact of the restructured
24		nonrecurring cost study.

1	Q.	PLEASE DESCRIBE THE SITUATIONS WHEN CHARGES FOR LINE
2		CONDITIONING, ALSO REFERRED TO AS LOOP MODIFICATION,
3		WOULD APPLY.
4		
5	A.	Unbundled loop modification charges are applicable when a CLEC requests that
6		BellSouth remove equipment that has been placed on copper loops (i.e., load coils,
7		low-pass filters, range extenders, etc.) and/or by removing bridged tap attached to
8		the copper loop. The FCC permits BellSouth to charge CLECs for loop
9		conditioning. The FCC's UNE Remand Order states, "[w]e agree that networks
10		built today normally should not require voice-transmission enhancing devices on
11		loops of 18,000 feet or shorter. Nevertheless, the devices are sometimes present on
12		such loops, and the incumbent LEC may incur costs in removing them. Thus, under
13		our rules, the incumbent should be able to charge for conditioning such loops." [See
14		Paragraph 193, Footnote deleted]
15		
16		Obviously, since the FCC allows the recovery of costs for conditioning loops under
17		18,000 feet, rates for conditioning loops greater than 18,000 feet are also
18		appropriate. A CLEC may use BellSouth's unbundled loop modification offering to
19		remove bridge tap and/or equipment from any copper loop within BellSouth's
20		network for the purposes of providing advanced data services.
21		
22	Q.	WHAT ARE THE APPROPRIATE RATES FOR LOOP MODIFICATION?
23		
24	A.	BellSouth's proposed rates for unbundled loop modification are contained in Exhibit
25		JAR-1. These proposed rates are supported by cost studies sponsored by Ms.
		Caldwell.

1		
2	Q.	PLEASE EXPLAIN WHICH SUBLOOP ELEMENTS BELLSOUTH IS
3		OBLIGATED TO UNBUNDLE.
4		
5	A.	The FCC's UNE Remand Order defines the subloop network element as any
6		portion of the loop that is technically feasible to access at terminals in the ILEC's
7		outside plant, including inside wire. Consistent with this order, BellSouth makes the
8		following subloop elements available to CLECs on an unbundled basis:
9		
10		The Network Interface Device ("NID") provides a single line termination
11		device or that portion of a multiple line termination device required to
12		terminate a single line or circuit. The NID, located on the customer's
13		premises, establishes the official network demarcation point between a
14		telecommunications company and its end user customer. BellSouth provides
15		access to the NID on an unbundled basis; therefore, a CLEC may order a
16		stand alone NID from BellSouth. However, when a CLEC orders an
17		unbundled loop, BellSouth provides the NID also. In all cases where
18		BellSouth provisions a loop, it must be properly grounded.
19		
20		Loop feeder provides a transmission path between the feeder distribution
21		interface and the telephone company central office.
22		
23		Loop distribution or distribution media provides a transmission path
24		between a feeder distribution interface and the NID at the customer's
25		premises. If the CLEC were to take loop distribution as an unbundled

1		element, then the CLEC would presumably provide its own feeder facilities
2		to its own switch.
3		
4		Loop concentration enables CLECs to concentrate up to 96 sub-loops on
5		2 DS1s for the purpose of connecting the sub-loops (at a concentrated level)
6		to BellSouth's feeder system.
7		
8		Inside Wire, as described by the FCC in its UNE Remand Order, includes
9		wire owned and controlled by the ILEC on or near an end user customer
10		premises. Such inside wire would include access to BellSouth's Network
11		Terminating Wire ("NTW") and Intrabuilding Network Cable ("INC").
12		Inside wire on the customer's side of the demarcation point (typically the
13		NID) is owned and controlled by the customer.
14		
15	Q.	HOW SHOULD THE PRICES FOR UNBUNDLED SUBLOOP ELEMENTS
16		BE SET?
17		
18	A.	The prices for unbundled subloop elements should be established using the same
19		cost methodology used for other unbundled network elements. Ms. Caldwell
20		sponsors BellSouth's cost studies for subloop elements. Prices for the subloop
21		elements that BellSouth makes available to CLECs on an unbundled basis are
22		contained in Exhibit JAR-1 attached to my testimony.
23		
24	Q.	IN ITS UNE REMAND ORDER, DID THE FCC MODIFY ITS DEFINITION
25		OF THE NID?

A. Yes. Initially, in its First Report and Order in CC Docket No. 96-98 issued August 8, 1996 ("Local Competition Order"), the FCC defined the NID network element as a cross-connect device used to connect loop facilities to inside wiring. In its UNE Remand Order at ¶ 233, the FCC modified its original definition of the NID to "include all features, functions, and capabilities of the facilities used to connect the loop distribution plant to the customer premises wiring, regardless of the particular design of the NID mechanism." The FCC's stated goal was to have the NID definition "be flexible and technology neutral." (Id. ¶ 234) The FCC noted that its "rules permit considerable variation in the interconnection facilities between carrier and customer-controlled facilities," and that "evolution in network design and technology will likely cause additional design variations among the hardware interfaces between carrier and customer premises facilities." (Id.) Therefore, in its NID definition, the FCC's use of the terms "features, functions and capabilities" means that, regardless of the type of device used to connect the loop distribution plant to the customer premises wiring, competitors will be able to obtain access to any such facilities as an unbundled network element. Indeed, the FCC stated that its "intention is to ensure that the NID definition will apply to new technologies, as well as current technologies, and to ensure that competitors will continue to be able to access customer premises facilities as an unbundled network element, as long as that access is required pursuant to section 251(d)(2) standards." (Id.)The FCC also specified that its definition of the NID includes any means of interconnection of customer premises wiring to the incumbent LEC's distribution plant, such as a cross-connect device used for that purpose. However, the FCC

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1		specifically declined to include inside wiring in the definition of the NID, or to include
2		the NID as part of any other subloop element.
3		
4	Q.	DOES THE FCC'S CURRENT DEFINITION OF THE NID HAVE ANY
5		AFFECT ON THE PRICES THE AUTHORITY IS CURRENTLY
6		CONSIDERING FOR THE NID?
7		
8	A.	No, it does not. The costs the Authority is considering for the NID are equal to the
9		forward looking economic cost as developed using the Authority's cost study
10		adjustments. The only additional element required by the FCC in its UNE Remand
11		Order is a NID cross-connect, and BellSouth's proposed rate for this element is
12		found on Exhibit JAR-1.
13		
14	Q.	HOW IS THE FCC'S DEFINITION OF INSIDE WIRE IN ITS UNE REMAND
15		ORDER DIFFERENT FROM THE GENERALLY ACCEPTED MEANING OF
16		INSIDE WIRE?
17		
18	A.	Since it was deregulated, inside wire has been defined as wire on the customer's side
19		of the demarcation point. Consequently, inside wire is considered to be owned and
20		controlled by the customer. In its UNE Remand Order, however, the FCC used the
21		term "inside wire" when discussing access to BellSouth's Unbundled Network
22		Terminating Wire ("UNTW") and Unbundled Intrabuilding Network Cable
23		("UINC"). Inside Wire, as described by the FCC in its UNE Remand Order,
24		includes wire owned and controlled by the ILEC on or near an end user customer
25		premises. Although BellSouth does not agree that the term "inside wire"
		appropriately encompasses UNTW and UINC, BellSouth does agree that UNTW

1		and UINC are subloop elements, which CLECs are entitled to purchase on an
2		unbundled basis, and for which BellSouth should be compensated.
3		
4	Q.	DOES BELLSOUTH'S PETITION FOR RECONSIDERATION ON THE
5		DEFINITION OF INSIDE WIRE AFFECT THE RATES PROPOSED IN THIS
6		PROCEEDING?
7		
8	A.	No. On February 17, 2000 BellSouth petitioned the FCC to reconsider its
9		definition of inside wire adopted in the UNE Remand Order. Specifically, BellSouth
10		has requested the FCC to continue to use its historic definition of inside wire and not
11		expand its definition to include UNTW and UINC. Regardless of the outcome of
12		BellSouth's Petition, UNTW and UINC would remain subloop elements, and the
13		rates BellSouth proposes in this proceeding for UNTW and UINC comply with the
14		FCC's rules.
15		
16	Q.	PLEASE EXPLAIN HOW THE PROVISION OF UNBUNDLED LOCAL
17		SWITCHING IS AFFECTED BY THE FCC'S UNE REMAND ORDER.
18		
19	A.	BellSouth, like other incumbents, is required to unbundle local loops and local
20		switching in certain instances so that CLECs can purchase these elements for use in
21		their networks. However, in its UNE Remand Order the FCC determined that, in
22		certain geographic areas, and under specific circumstances, the incumbent LEC can
23		elect not to provide unbundled switching. The geographic area that is involved is
24		what is referred to as Density Zone 1 in a top 50 Metropolitan Statistical Area
25		("MSA"). The specific circumstances involve two considerations. First, the
		incumbent LEC has to agree to provide, at TELRIC-based rates, enhanced

1		extended links ("EELs") in this geographic area to CLECs that serve end users with
2		four or more lines. The EEL is a specific combination of loop and transport UNEs.
3		What this means is that the ILEC will combine a UNE loop and UNE transport to
4		assist the CLEC in getting to the switch that the CLEC will use to provide local
5		switching. Second, the incumbent is only relieved of the obligation to provide local
6		switching for customers of the CLEC who have four or more lines.
7		
8		The FCC's logic here is that the biggest part of the consumer market involves
9		customers who have three or fewer lines. By the time a customer has four or more
10		lines, the customer is either a mid-sized or a large customer, and CLECs are not
11		impaired without access to BellSouth's unbundled switching to address the
12		telecommunications needs of these classes of customers.
13		
14	Q.	WHY DOES THE INCUMBENT LEC HAVE TO PROVIDE ACCESS TO
15		EELS IN ORDER TO TAKE ADVANTAGE OF THIS EXEMPTION?
16		
17	A.	Basically, the thought is that, if the incumbent LEC is willing to provide an EEL, the
18		CLEC can haul the call anywhere in the area to a switch. The FCC obviously
19		concluded that, at least in the top 50 MSAs, switching is available from any number
20		of sources. As long as the incumbent LEC allows the CLEC to have an EEL so that
21		the end user could be connected to a switch, it is not necessary for the incumbent
22		LEC to unbundle local switching.
23		
24		The FCC's Rule 51.319(c)(2) is quite clear. It simply states that if the incumbent
25		LEC provides nondiscriminatory access to the EEL in Density Zone 1 in a top 50
		MSA, then the incumbent LEC is not required to unbundle local circuit switching in

1		that area for end users having four or more lines. In adopting this position in its UNI
2		Remand Order at ¶ 293, the FCC found that a rule that provides access to
3		unbundled local circuit switching to requesting carriers when they serve customers
4		with three lines or fewer captures a significant portion of the mass market. The FCC
5		rejected the CLECs' contrary arguments.
6		
7	Q.	DOES THE FCC'S UNE REMAND ORDER IMPACT THE RATES THIS
8		AUTHORITY INTENDS TO ESTABLISH FOR LOCAL SWITCHING?
9		
10	A.	No, it does not. The rates the Authority intends to establish in Docket No. 97-
11		01262 do not impact those situations where BellSouth is required to provide CLEC
12		with access to unbundled local switching. When BellSouth elects to take advantage
13		of the switching exemption I just discussed, BellSouth will offer CLECs access to
14		new EELs for qualifying customers at the sum of the recurring rates for the elements
15		that comprise an EEL as established in Docket No. 97-01262. The nonrecurring
16		prices for BellSouth to provide these new EEL combinations are contained on
17		Exhibit JAR-1 and are supported by the cost studies BellSouth filed on October 20,
18		2000.
19		
20	Q.	DOES THE FCC'S UNE REMAND ORDER HAVE ANY EFFECT ON THE
21		UNBUNDLING OF VERTICAL FEATURES?
22		
23	A.	No. Nothing in the UNE Remand Order modified any previous FCC decisions or
24		other rulings concerning the unbundling of vertical features. The Authority intends to
25		establish rates for unbundled vertical features in Docket No. 97-01262.

1	Q.	DID THE FCC'S UNE REMAND ORDER IDENTIFY ADDITIONAL
2		UNBUNDLING REQUIREMENTS FOR INTEROFFICE TRANSMISSION
3		FACILITIES?
4		
5	A.	The FCC's UNE Remand Order determined that high capacity interoffice
6		transmission facilities should be provided on an unbundled basis. Further, the Order
7		required that ILECs provide unbundled access to dark fiber. In order to comply
8		with those requirements, BellSouth is proposing rates for unbundled interoffice
9		transport at levels such as DS3, OC3 and OC48, and is also proposing rates for
10		unbundled dark fiber. Please see Exhibit JAR-1 for BellSouth's proposed rates that
11		are supported by cost studies sponsored by Ms. Caldwell.
12		
13	Q.	PLEASE DESCRIBE BELLSOUTH'S OBLIGATIONS RELATIVE TO
14		PROVIDING CLECS WITH ACCESS TO BELLSOUTH'S SIGNALING
15		NETWORKS AND CALL-RELATED DATABASES.
16		
17	A.	The FCC's Rule 51.319 requires BellSouth to provide nondiscriminatory access to
18		signaling networks and call-related databases. When a CLEC purchases unbundled
19		switching, BellSouth provides access to its signaling network from that switch in the
20		same manner in which BellSouth obtains such access itself. When a CLEC provides
21		its own switching facilities, BellSouth also provides access to its signaling network for
22		each of the CLEC's switches in the same manner as BellSouth connects one of its
23		own switches. For query and call-related database response, BellSouth provides
24		access to its call-related databases.
25		

1	Q.	WHAT ARE THE RATES BELLSOUTH PROPOSES FOR ACCESS TO ITS
2		SIGNALING NETWORK AND CALL-RELATED DATABASES?
3		
4	A.	BellSouth proposes the rates contained in Exhibit JAR-1, attached to my testimony,
5		for access to BellSouth's signaling network and the following call-related databases:
6		<ul> <li>BellSouth Calling Name Database Service (CNAM)</li> </ul>
7		<ul> <li>BellSouth Access to E911 Service</li> </ul>
8		<ul> <li>Local Number Portability (LNP) Query Service</li> </ul>
9		
10	Q.	WHAT DOES THE FCC'S UNE REMAND ORDER SAY ABOUT
11		OPERATIONS SUPPORT SYSTEMS ("OSS")?
12		
13	A.	Basically, in its UNE Remand Order, the FCC reaffirmed that incumbent LECs must
14		provide access to OSS functions on an unbundled basis to requesting carriers. As
15		Mr. Pate discusses in his testimony, BellSouth provides such access. The UNE
16		Remand Order does not impact the existing CLEC OSS interfaces or require any
17		modifications to these interfaces. The UNE Remand Order does not impact the
18		rates that CLECs will pay for access to the OSS functions that the Authority intends
19		to establish in Docket No. 97-01262. The FCC clarified in its UNE Remand Order
20		that its definition of OSS includes access to loop qualification information. As a
21		result, the Authority must establish rates for CLECs to access this information in this
22		proceeding
23		
24	Q.	WHAT IS LOOP MAKE-UP INFORMATION?
25		

1	A.	As defined in the FCC's UNE Remand Order, loop make-up information (also
2		referred to as loop qualification information) identifies the physical attributes of the
3		loop plant (such as loop length, the presence of analog load coils and bridge taps,
4		and the presence and type of Digital Loop Carrier), which then enables carriers to
5		determine whether the loop is capable of supporting xDSL and other advanced
6		technologies. BellSouth witness Mr. Ron Pate describes the processes BellSouth
7		makes available to CLECs for access to such loop make-up information.
8		
9	Q.	WHAT RATES DOES BELLSOUTH PROPOSE TO COVER THE COST OF
10		PROVIDING ACCESS TO LOOP MAKE-UP INFORMATION?
11		
12	A.	On Exhibit JAR-1, BellSouth proposes rates for two elements – access to the loop
13		make-up database (Cost Ref. No. J.3.1 - Mechanized Loop Make-up) and a
14		service inquiry with loop make-up (Cost Ref. Nos. J.3.3 and J.3.4 - Manual Loop
15		Make-up with or without Facility Reservation Number). The proposed rates are
16		based on BellSouth's cost studies as sponsored by Ms. Caldwell.
17		
18	Q.	IS BELLSOUTH REQUIRED TO PROVIDE ACCESS TO PACKET
19		SWITCHING UNEs?
20		
21	A.	No. With regard to the obligation to unbundle packet switching, the FCC stated in
22		its Third Report and Order:
23		We decline at this time to unbundle the packet switching functionality, except
24		in limited circumstances. Among other potential factors, we recognize that
25		the presence of multiple requesting carriers providing service with their own
		packet switches is probative of whether they are impaired without access to

1			unbundled packet switching. The record demonstrates that competitors are
2			actively deploying facilities used to provide advanced services to serve
3			certain segments of the market – namely, medium and large business – and
4			hence they cannot be said to be impaired in their ability to offer service, at
5			least to these segments without access to the incumbent's facilities. (Order at
6			¶ 306)
7			
8	Q.	WHA	T ARE THE "LIMITED CIRCUMSTANCES" REFERRED TO BY THE
9		FCC?	
10			
11	A.	The Fo	CC's Rule 51.319(c)(3)(B) regarding packet switching requires that an ILEC
12		provid	e unbundled packet switching only where each of the following conditions are
13		satisfie	ed:
14		(i)	The incumbent LEC has deployed digital loop carrier systems, including but
15			not limited to, integrated digital loop carrier or universal digital loop carrier
16			systems; or has deployed any other system in which fiber optic facilities
17			replace copper facilities in the distribution section (e.g., end office to remote
18			terminal, pedestal or environmentally controlled vault);
19		(ii)	There are no spare copper loops capable of supporting the xDSL services
20			the requesting carrier seeks to offer;
21		(iii)	The incumbent LEC has not permitted a requesting carrier to deploy a
22			Digital Subscriber Line Access Multiplexer at the remote terminal, pedestal
23			or environmentally controlled vault or other interconnection point, nor has the
24			requesting carrier obtained a virtual collocation arrangement at these subloop
25			interconnection points as defined under § 51.319(b); and
		(iv)	The incumbent LEC has deployed packet switching capability for its own

1		use.
2		
3	Q.	DOES BELLSOUTH OFFER THE DSLAM AS A UNE? ?
4		
5	A.	No. At paragraph 304 of its Third Report and Order, the FCC defines a DSLAM
6		as a component of packet switching. BellSouth knows of no instance in which all of
7		the conditions required by the FCC, stated above, will be satisfied. Therefore,
8		BellSouth is not required to offer packet switching components; e.g., DSLAMs, on
9		an unbundled basis.
10		
11	Q.	IS BELLSOUTH OBLIGATED TO PROVIDE CLECS WITH ACCESS TO
12		OPERATOR SERVICES AND DIRECTORY ASSISTANCE ("OS/DA") AS
13		UNES?
14		
15	A.	No. The FCC's UNE Remand Order found that CLECs are not impaired without
16		access to BellSouth's OS/DA as UNEs so long as BellSouth provides customized
17		routing (also referred to as selective routing). BellSouth offers selective routing;
18		therefore, certain elements on the BellSouth Tennessee Rate Sheet that BellSouth
19		submitted to the Authority on June 9, 2000 in Docket No. 97-01262 should be
20		removed (specifically, all elements shown under Cost Reference Nos. G.1 through
21		G.8).
22		
23	Q.	WHAT RATES DOES BELLSOUTH PROPOSE FOR SELECTIVE
24		ROUTING?
25		

1	A.	BellSouth offers CLECs two methods for selective routing: selective routing using
2		line class codes, or selective routing utilizing BellSouth's Advanced Intelligent
3		Network ("AIN") solution. Mr. Milner's testimony describes BellSouth's selective
4		routing offerings. BellSouth's proposed rates for selective routing using line class
5		codes are being considered in Docket No. 97-01262. BellSouth's proposed rates
6		for selective routing using BellSouth's AIN solution are contained in Exhibit JAR-1.
7		The proposed rates for BellSouth's AIN solution for selective routing are based on
8		BellSouth's cost studies as sponsored by Ms. Caldwell.
9		
0	Q.	PLEASE EXPLAIN "LINE SHARING" AND "SPECTRUM MANAGEMENT.
11		
12	A.	The local loop from the central office to the customer's premises can be used to
13		provide both voice and packet data service. There are a number of carriers who
14		want to use that loop to provide packet data service while the ILEC would continue
15		to provide voice service. Inserting specific equipment on the line enables the
16		spectrum to be "shared" by the voice provider and the data provider, a functionality
7		also known as "line sharing." In its Line Sharing Order, the FCC specifically states
8		"[t]he provision of xDSL-based service by a competitive LEC and voiceband
19		service by an incumbent LEC on the same loop is frequently called 'line sharing.'"
20		(Line Sharing Order at ¶ 4)
21		
22	Q.	UNDER WHAT CONDITIONS IS AN ILEC SUCH AS BELLSOUTH
23		OBLIGATED TO PROVIDE LINE SHARING?
24		
25	A.	ILECs are only obligated to provide line sharing to a single requesting carrier at the
		same customer address as the traditional POTS analog voice service provided by

1 the incumbent. Line sharing as ordered by the FCC is available under the following conditions: 2 Two carriers – one voice provider (ILEC) and one data provider 3 (CLEC) – serve one customer per loop (Id. ¶ 74); 4 5 The ILEC provides traditional POTS analog voiceband service to the customer on the line to be shared (Id. ¶ 19); 6 7 The CLEC provides xDSL-based service to the customer (Id. ¶ 13); 8 The CLEC's xDSL technologies do not use the frequencies immediately above the voiceband, thereby preserving them as a "buffer" zone to 9 ensure the integrity of the voiceband traffic (Id. fn 136); 10 The CLEC's xDSL technology does not interfere with analog voiceband 11 transmission (Id. ¶ 70-71); and 12 If the ILEC's retail customer disconnects his/her POTs service, the data 13 14 provider must purchase the entire stand-alone loop if it wishes to 15 continue providing xDSL service to the customer. Similarly, ILECs are not required to provide line sharing to a requesting carrier when the 16 CLEC purchases a combination of network elements known as the 17 18 UNE platform. (Id. ¶¶ 72-73) The "platform" referred to in the preceding reference is the loop/port combination. 19 20 When a CLEC purchases the loop/port combination, the CLEC becomes the voice 21 service provider. In order for BellSouth to provide access to the high frequency 22 portion of the loop when the CLEC has purchased the loop/port combination, 23 BellSouth would have to physically separate the loop/port combination, add in a 24 splitter, and then recombine. BellSouth is not required to perform these functions for 25 CLECs.

ı		rutuler, the FCC's Line Sharing Order specifically concluded in paragraph 72 that
2		incumbent LECs must make available to competitive carriers only the high frequency
3		portion of the loop network element on loops on which the incumbent LEC is also
4		providing analog voice service." (emphasis added) In that same paragraph, the
5		FCC stated that "incumbent carriers are not required to provide line sharing to
6		requesting carriers that are purchasing a combination of network elements known as
7		the platform. In that circumstance, the incumbent no longer is the voice provider to
8		the customer." The platform referred to is the loop/port combination. Also, the
9		FCC's Line Sharing Order thoroughly examined whether CLECs would be impaired
0		without access to line sharing when the ILEC is not providing the voice service. The
11		FCC determined that no such impairment exists.
12		
13		Finally, the FCC reiterated its position in its Order dated June 30, 2000 in CC
14		Docket No. 00-65 (SBC – Texas Section 271 Application). At paragraph 324 the
15		Order states, "the obligation of an incumbent LEC to make the high frequency
16		portion of the loop separately available is limited to those instances in which the
17		incumbent LEC is providing, and continues to provide, voice service on the
8		particular loop to which the requesting carrier seeks access."
19		
20	Q.	WHAT ARE THE RATES BELLSOUTH PROPOSES FOR LINE SHARING?
21		
22	A.	BellSouth's proposed rates for line sharing, including rates for CLEC owned
23		splitters, are contained in Exhibit JAR-1. The proposed rates are supported by cost
24		studies sponsored by Ms. Caldwell.
25		

2 A. Yes. #231084

	. Unbundled Network Element	Zone	Recurring	Nonrecurring		Disconnect	
Cost Ref. No.				First	Additional	First	Additional
A.0	UNBUNDLED LOCAL LOOP						
A.2	SUB-LOOP						
A.2.11	Sub-Loop Distribution Per 4-Wire Analog Voice Grade Loop	1	\$7.30	\$147.93	\$75.11	\$99.96	\$16.98
		2	\$9.54	\$147.93	\$75.11	\$99.96	\$16.98
		3	\$12.47	\$147.93	\$75.11	\$99.96	\$16.98
A.2.13	Network Interface Device Cross Connect			\$11.11	\$11.11		
A.2.14	2-Wire Intrabuilding Network Cable (INC)		\$1.47	\$107.63	\$34.81	\$94.41	\$13.09
A.2.15	4-Wire Intrabuilding Network Cable (INC)		\$2.55	\$119.40	\$46.58	\$99.96	\$16.98
A.2.17	Sub-Loop - Per Cross Box Location - CLEC Feeder Facility Set-Up			\$517.25			
A.2.18	Sub-Loop - Per Cross Box Location - Per 25 Pair Panel Set-Up			\$42.68			
A.2.19	Sub-Loop - Per Building Equipment Room - CLEC Feeder Facility Set-Up			\$358.04			
A.2.20	Sub-Loop - Per Building Equipment Room - Per 25 Pair Panel Set-Up			\$105.13			
A.2.21	Sub-Loop - Per Cross Box Location - CLEC Distribution Facility Set-Up			\$517.25			
A.2.24	Sub-Loop - Per 4-Wire Analog Voice Grade Loop / Feeder Only	1	\$21.52	\$137.31	\$61.93	\$118.04	\$30.13
		2	\$28.11	\$137.31	\$61.93	\$118.04	\$30.13
		3	\$36.76	\$137.31	\$61.93	\$118.04	\$30.13
A.2.25	Sub-Loop - Per 2-Wire ISDN Digital Grade Loop / Feeder Only	1	\$16.11	\$142.83	\$67.45	\$104.67	\$18.53
		2	\$21.04	\$142.83	\$67.45	\$104.67	\$18.53
		3	\$27.51	\$142.83	\$67.45	\$104.67	\$18.53
A.2.29	Sub-Loop - Per 4-Wire 56 or 64 Kbps Digital Grade Loop / Feeder Only	1	\$26.06	\$116.00	\$40.62	\$106.82	\$18.91
		2	\$34.03	\$116.00	\$40.62	\$106.82	\$18.91
		3	\$44.50	\$116.00	\$40.62	\$106.82	\$18.91
A.2.30	Sub-Loop - Per 2-Wire Copper Loop / Feeder Only	1	\$9.52	\$114.27	\$38.89	\$104.67	\$18.53
		2	\$12.43	\$114.27	\$38.89	\$104.67	\$18.53
		3	\$16.26	\$114.27	\$38.89	\$104.67	\$18.53
A.2.32	Sub-Loop - Per 4-Wire Copper Loop / Feeder Only	1	\$14.37	\$123.41	\$48.03	\$110.44	\$22.53
		2	\$18.76	\$123.41	\$48.03	\$110.44	\$22.53
		3	\$24.53	\$123.41	\$48.03	\$110.44	\$22.53
A.2.40	Sub-Loop - Per 2-Wire Copper Loop / Distribution Only	1	\$5.16	\$110.71	\$37.89	\$94.41	\$13.09
	1 2 2 2 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2	\$6.74	\$110.71	\$37.89	\$94.41	\$13.09
		3	\$8.81	\$110.71	\$37.89	\$94.41	\$13.09

				Nonrec	urring	Disconnect	
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional
A.2.42	Sub-Loop - Per 4-Wire Copper Loop / Distribution Only	1	\$6.52	\$117.12	\$44.30	\$99.96	\$16.98
		2	\$8.52	\$117.12	\$44.30	\$99.96	\$16.98
		3	\$11.14	\$117.12	\$44.30	\$99.96	\$16.98
A.2.44	Network Interface Device (NID) - 2 line		·	\$89.69	\$54.56	\$0.6391	\$0.639
A.2.45	Network Interface Device (NID) - 6 line			\$129.65	\$94.51	\$0.6522	\$0.652
A.3	LOOP CHANNELIZATION AND CO INTERFACE (INSIDE CO)						
A.3.12	Unbundled Loop Concentration - System A (TR008)		\$500.18	\$613.60			
A.3.13	Unbundled Loop Concentration - System B (TR008)		\$54.82	\$255.67			
A.3.14	Unbundled Loop Concentration - System A (TR303)		\$539.00	\$613.60			
A.3.15	Unbundled Loop Concentration - System B (TR303)		\$92.37	\$255.67			
A.3.16	Unbundled Loop Concentration - DS1 Line Interface Card		\$6.23	\$74.39	\$53.07	\$30.23	\$8.4
A.3.17	Unbundled Loop Concentration - POTS Card		\$2.32	\$8.69	\$8.65	\$9.71	\$9.6
A.3.18	Unbundled Loop Concentration - ISDN (Brite Card)		\$8.46	\$8.69	\$8.65	\$9.71	\$9.6
A.3.19	Unbundled Loop Concentration - SPOTS Card		\$12.45	\$8.69	\$8.65	\$9.71	\$9.6
A.3.20	Unbundled Loop Concentration - Specials Card		\$7.53	\$8.69	\$8.65	\$9.71	\$9.6
A.3.21	Unbundled Loop Concentration - TEST CIRCUIT Card		\$35.77	\$8.69	\$8.65	\$9.71	\$9.6
A.3.22	Unbundled Loop Concentration - Digital 19, 56, 64 Kbps Data		\$11.03	\$8.69	\$8.65	\$9.71	\$9.6
A.5	2-WIRE ISDN DIGITAL GRADE LOOP						
A.5.6	Universal Digital Channel	1	\$21.15	\$228.92	\$152.42	\$110.01	\$21.6
		2	\$27.62	\$228.92	\$152.42	\$110.01	\$21.6
		3	\$36.12	\$228.92	\$152.42	\$110.01	\$21.6
A.6	2-WIRE ASYMMETRICAL DIGITAL SUBSCRIBER LINE (ADSL) COMPATIBLE LOOP						
A.6.5	2-Wire Asymmetrical Digital Subscriber Line (ADSL) Compatible Loop (Nonrecurring with Loop Makeup)			\$198.59	\$88.13	\$111.76	\$20.8
7 11 01 0	2-Wire Asymmetrical Digital Subscriber Line (ADSL) Compatible Loop			ψ100.00	φου. το	ψ111110	Ψ20.0
A.6.6	(Nonrecurring without Loop Makeup)			\$123.38	\$54.30	\$94.14	\$15.3
	2-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL)						
A.7	COMPATIBLE LOOP						
A.7.5	2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop (Nonrecurring with Loop Makeup)			\$201.24	\$88.80	\$111.76	\$20.8
A.7.6	2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop (Nonrecurring without Loop Makeup)			\$123.38	\$54.30	\$94.14	\$15.3

				Nonrec	urring	Disconnect	
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional
	4-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL)						
A.8	COMPATIBLE LOOP						
	4-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop						
A.8.5	(Nonrecurring with Loop Makeup)			\$214.20	\$101.76	\$117.67	\$24.85
	4-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop				<b>.</b>		
A.8.6	(Nonrecurring without Loop Makeup)			\$136.35	\$67.27	\$99.69	\$19.29
A.9	4-WIRE DS1 DIGITAL LOOP						
A.9.21	Sub-Loop Feeder Per 4-Wire DS1 Digital Loop	1	39.74	\$116.00	\$40.62	\$106.82	\$18.91
	, , , , , , , , , , , , , , , , , , ,	2	51.90	\$116.00	\$40.62	\$106.82	\$18.91
		3	67.86	\$116.00	\$40.62	\$106.82	\$18.91
	CONCENTRATION PER SYSTEM PER FEATURE ACTIVATED (OUTSIDE						
A.12	CENTRAL OFFICE)						
A.12.1	Unbundled Loop Concentration - System A (TR008)		\$554.30	\$384.75	\$209.58	\$229.31	\$72.71
A.12.2	Unbundled Loop Concentration - System B (TR008)		\$79.61	\$384.75	\$209.58	\$229.31	\$72.71
A.12.3	Unbundled Loop Concentration - System A (TR303)		\$590.18	\$384.75	\$209.58	\$229.31	\$72.71
A.12.4	Unbundled Loop Concentration - System B (TR303)		\$115.49	\$384.75	\$209.58	\$229.31	\$72.71
A.12.5	Unbundled Sub-loop Concentration - USLC Feeder Interface		\$60.89	\$116.00	\$40.62	\$106.82	\$18.91
A.12.6	Unbundled Loop Concentration - POTS Card		\$2.43	\$8.69	\$8.65	\$9.71	\$9.65
A.12.7	Unbundled Loop Concentration - ISDN (Brite Card)		\$8.93	\$8.69	\$8.65	\$9.71	\$9.65
A.12.8	Unbundled Loop Concentration - SPOTS Card		\$13.14	\$8.69	\$8.65	\$9.71	\$9.65
A.12.9	Unbundled Loop Concentration - Specials Card		\$7.94	\$8.69	\$8.65	\$9.71	\$9.65
A.12.10	Unbundled Loop Concentration - TEST CIRCUIT Card		\$37.78	\$8.69	\$8.65	\$9.71	\$9.65
A.12.11	Unbundled Loop Concentration - Digital 19, 56, 64 Kbps Data		\$11.64	\$8.69	\$8.65	\$9.71	\$9.65
A.13	2-WIRE COPPER LOOP						
A.13.1	2-Wire Copper Loop - short (Nonrecurring with Loop Makeup)	1	\$13.21	\$199.70	\$87.26	\$111.76	\$20.81
	l	2	\$17.25	\$199.70	\$87.26	\$111.76	\$20.81
		3	\$22.56	\$199.70	\$87.26	\$111.76	\$20.81
A.13.1	2-Wire Copper Loop - short (Nonrecurring without Loop Makeup)	1	\$13.21	\$121.84	\$52.77	\$94.14	\$15.36
A.13.1	2-Wire Copper Loop - Short (Nonrecurring without Loop Makeup)	2	\$17.25	\$121.84	\$52.77 \$52.77	\$94.14 \$94.14	\$15.36
		3	\$22.56	\$121.84	\$52.77 \$52.77	\$94.14	\$15.36
				·	·	·	
A.13.7	2-Wire Copper Loop - long (Nonrecurring with Loop Makeup)	1	\$42.00	\$187.34	\$74.90	\$111.76	\$20.81
		2	\$54.85	\$187.34	\$74.90	\$111.76	\$20.81
		3	\$71.72	\$187.34	\$74.90	\$111.76	\$20.81
A.13.7	2-Wire Copper Loop - long (Nonrecurring without Loop Makeup)	1	\$42.00	\$109.48	\$40.41	\$94.14	\$15.36
		2	\$54.85	\$109.48	\$40.41	\$94.14	\$15.36
		3	\$71.72	\$109.48	\$40.41	\$94.14	\$15.36
	1						

		_		Nonrec	urring	Disconnect	
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional
A.14	4-WIRE COPPER LOOP						
A.14.1	4-Wire Copper Loop - short (Nonrecurring with Loop Makeup)	1	\$18.18	\$212.67	\$100.22	\$117.67	\$24.85
		2	\$23.74	\$212.67	\$100.22	\$117.67	\$24.85
		3	\$31.05	\$212.67	\$100.22	\$117.67	\$24.85
A.14.1	4-Wire Copper Loop - short (Nonrecurring without Loop Makeup)	1	\$18.18	\$134.81	\$65.73	\$99.69	\$19.29
		2	\$23.74	\$134.81	\$65.73	\$99.69	\$19.29
		3	\$31.05	\$134.81	\$65.73	\$99.69	\$19.29
A.14.7	4-Wire Copper Loop - long (Nonrecurring with Loop Makeup)	1	\$56.62	\$200.31	\$87.86	\$117.67	\$24.85
		2	\$73.94	\$200.31	\$87.86	\$117.67	\$24.85
		3	\$96.69	\$200.31	\$87.86	\$117.67	\$24.85
A.14.7	4-Wire Copper Loop - long (Nonrecurring without Loop Makeup)	1	\$56.62	\$122.45	\$53.37	\$99.69	\$19.29
	3	2	\$73.94	\$122.45	\$53.37	\$99.69	\$19.29
		3	\$96.69	\$122.45	\$53.37	\$99.69	\$19.29
A.15	UNBUNDLED NETWORK TERMINATING WIRE (NTW)						
A.15.1	Unbundled Network Terminating Wire (NTW) per Pair		\$0.3878	\$59.77		\$0.5814	
A.16	HIGH CAPACITY UNBUNDLED LOCAL LOOP						
A.16.1	High Capacity Unbundled Local Loop - DS3 - Facility Termination		\$374.24	\$595.37	\$304.50	\$234.83	\$170.16
A.16.2	High Capacity Unbundled Local Loop - DS3 - Pacinty Termination  High Capacity Unbundled Local Loop - DS3 - Per Mile		\$9.19	φυθυ.υ1	φ304.30	φ254.05	φ170.10
A.10.2	High Capacity Unbundled Local Loop -DS3 -Incremental Cost - Manual Svc		ψ3.13				
A.16.3	Order vs. Electronic			\$36.84	\$36.84	\$19.01	\$19.01
A.16.4	High Capacity Unbundled Local Loop - OC3 - Facility Termination		\$618.88	\$787.84	\$262.31	\$109.04	\$105.91
A.16.5	High Capacity Unbundled Local Loop - OC3 - Per Mile		\$6.97	·	·	·	·
	High Capacity Unbundled Local Loopl - OC3 - Incremental Cost Manual Svc						
A.16.6	Order vs Electronic			\$36.84	\$36.84	\$19.01	\$19.01
A.16.7	High Capacity Unbundled Local Loop - OC12 - Facility Termination		\$2,246.28	\$992.37	\$262.31	\$109.04	\$105.91
A.16.8	High Capacity Unbundled Local Loop - OC12 - Per Mile		\$8.58				
	High Capacity Unbundled Local Loop -OC12 - Incremental Cost - Manual Svc						
A.16.9	Order vs. Electronic		£4.400.44	\$36.84	\$36.84	\$19.01	\$19.01
A.16.10	High Capacity Unbundled Local Loop - OC48 - Facility Termination High Capacity Unbundled Local Loop - OC48 - Per Mile		\$1,490.11	\$1,190	\$255.01	\$128.05	\$124.92
A.16.11	High Capacity Unbundled Local Loop - OC48 - Per Mile  High Capacity Unbundled Local Loop - OC48 - Incremental Cost - Manual Svc		\$28.14				
A.16.12	Order vs. Electronic			\$36.84	\$36.84	\$19.01	\$19.01
A.16.12 A.16.13	High Capacity Unbundled Local Loop - OC48 - Interface OC12 on OC48		\$678.67	\$177.59	\$163.78	\$109.04	\$105.91
A.10.13	High Capacity Unbundled Local Loop - OC48 - Interface OC12 on OC48  High Capacity Unbundled Local Loop - OC48 - Interface-Incremental Cost-		ψ010.01	ψ177.59	ψ103.76	ψ103.04	ψ103.31
A.16.14	Manual Svc Order vs Electronic			\$36.84	\$36.84	\$19.01	\$19.01
A.16.15	High Capacity Unbundled Local Loop - STS-1 - Facility Termination		\$389.35	\$595.37	\$304.50	\$215.82	\$151.15
A.16.16	High Capacity Unbundled Local Loop - STS-1 - Per Mile		\$9.19	,	,,,,,,,,,	<del>+-</del>	Ţ <b>.</b>
	High Capacity Unbundled Local Loop - STS-1 - Incremental Cost - Manual Svc.		·				
A.16.17	Order vs. Electronic			\$36.84	\$36.84	\$19.01	\$19.01

				Nonrec	urring	Discor	nnect
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional
	LOOP CONDITIONING						
A.17	LOOP CONDITIONING		004.45				
A.17.1	Unbundled Loop Modification - Load Coil / Equipment Removal - short		\$61.45				
	Unbundled Loop Modification - Load Coil / Equipment Removal - long - First			****			
A.17.2	and Additional		<b>***</b>	\$321.99			
A.17.3	Unbundled Loop Modification - Bridged Tap Removal		\$61.49				
A.17.4	Unbundled Loop Modification - Additive			\$12.36	\$12.36		
	Unbundled Sub-Loop Modification - 2W/4W Copper Distribution Load						
A.17.5	Coil/Equipment Removal First/Add'l			\$335.36	\$7.82		
	Unbundled Sub-Loop Modification - 2W/4W Copper Distribution Bridged Tap						
A.17.6	Removal First/Add'l			\$528.48	\$9.74		
A.19	LOOP TESTING BEYOND VOICE GRADE						
A.19.1	Loop Testing Beyond VG - Basic per 1/2 hour			\$115.94	\$55.45		
A.19.2	Loop Testing Beyond VG - Overtime per 1/2 hour			\$151.69	\$72.75		
A.19.3	Loop Testing Beyond VG - Premium per 1/2 hour			\$187.43	\$90.06		
A.19.198	Loop Testing Beyond VG - Basic per 1/2 hour - Testing			\$53.31	\$53.31		
A.19.298	Loop Testing Beyond VG - Overtime per 1/2 hour - Testing			\$69.93	\$69.93		
A.19.398	Loop Testing Beyond VG - Premium per 1/2 hour - Testing			\$86.56	\$86.56		
D.0	UNBUNDLED TRANSPORT AND LOCAL INTERCONNECTION						
<i>D.</i> 0	CHBONDEED TRANSFORT AND EGGAL INTERCONNECTION						
D.5	LOCAL CHANNEL - DEDICATED						
D.5.7	Local Channel - Dedicated - DS3 - Per Mile		\$7.15				
D.5.8	Local Channel - Dedicated - DS3 - Facility Termination		\$611.30	\$595.37	\$304.50	\$215.82	\$151.1
	Local Channel - Dedicated - DS3 -Incremental Cost - Manual Svc Order vs.			·	·	· I	·
D.5.9	Electronic			\$36.84	\$36.84	\$19.01	\$19.0°
D.5.10	Local Channel - Dedicated - OC3 - Per Mile		\$6.00		·		·
D.5.11	Local Channel - Dedicated - OC3 - Facility Termination		\$1,320.28	\$787.84	\$262.31	\$109.04	\$105.9°
	Local Channel - Dedicated - OC3 - Incremental Cost - Manual Svc Order vs.			·	·	· ·	·
D.5.12	Electronic			\$36.84	\$36.84	\$19.01	\$19.0°
D.5.13	Local Channel - Dedicated - OC12 - Per Mile	1	\$8.58		·		• • •
D.5.14	Local Channel - Dedicated - OC12 - Facility Termination		\$7,849.28	\$992.37	\$262.31	\$109.04	\$105.9°
	Local Channel - Dedicated - OC12 - Incremental Cost - Manual Svc Order vs.		. ,				,
D.5.15	Electronic			\$36.84	\$36.84	\$19.01	\$19.0°
D.5.16	Local Channel - Dedicated - OC48 - Per Mile		\$28.14	,	*****	,	, , , , ,
D.5.17	Local Channel - Dedicated - OC48 - Facility Termination		\$1,908.11	\$985.07	\$255.01	\$109.04	\$105.9°
	Local Channel - Dedicated - OC48 - Incremental Cost - Manual Svc Order vs.		. ,				,
D.5.18	Electronic			\$36.84	\$36.84	\$19.01	\$19.0°

Cook Def. N				Nonrec	urring	Disconnect	
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional
D.5.19	Local Channel - Dedicated - OC48 - Interface OC12 on OC48		\$644.82	\$382.12	\$163.78	\$109.04	\$105.91
	Local Channel - Dedicated - OC48 - Interface - Inc. Cost - Man. Svc Order vs.						
D.5.20	Electronic			\$36.84	\$36.84	\$19.01	\$19.01
D.5.21	Local Channel - Dedicated - STS-1 - Facility Termination		\$599.59	\$588.07	\$297.20	\$215.82	\$151.15
	Local Channel - Dedicated - STS-1 - Incremental Cost - Manual Svc. Order vs.						
D.5.22	Electronic			\$36.84	\$36.84	\$19.01	\$19.01
D.5.23	Local Channel - Dedicated - STS-1 -Per Mile		\$7.15				
D.6	INTEROFFICE TRANSPORT - DEDICATED - DS3						
D.6.1	Interoffice Transport - Dedicated - DS3 - Per Mile		\$2.34				
D.6.2	Interoffice Transport - Dedicated - DS3 - Facility Termination		\$848.99	\$395.29	\$176.56	\$109.04	\$105.91
2.0.2	Interoffice Transport - DS3 - Incremental Cost - Manual Svc Order vs.		ψο .σ.σσ	φσσ.2σ	ψσ.σσ	ψ.σσ.σ.	ψ.σσ.σ.
D.6.3	Electronic			\$36.84	\$36.84	\$19.01	\$19.01
2.0.0				ψου.σ.:	ψοσιο .	ψ.σ.σ.	ψ.σ.σ.
D.7	INTEROFFICE TRANSPORT - DEDICATED - OC3						
D.7.1	Interoffice Transport - Dedicated - OC3 - Per Mile		\$4.43				
D.7.2	Interoffice Transport - Dedicated - OC3 - Facility Termination		\$2,361.11	\$689.30	\$163.78	\$130.87	\$130.87
	Interoffice Transport - Dedicated - OC3 - Incremental Cost - Manual Svc Order		<del></del>	<b>V</b>	********	******	*******
D.7.3	vs. Electronic			\$36.84	\$36.84	\$109.04	\$105.91
D.8	INTEROFFICE TRANSPORT - DEDICATED - OC12						
D.8.1	Interoffice Transport - Dedicated - OC12 - Per Mile		\$14.41				
D.8.2	Interoffice Transport - Dedicated - OC12 - Facility Termination		\$9,124.11	\$893.84	\$163.78	\$130.87	\$130.87
D.0.2	Interoffice Transport - Dedicated - OC12 - Incremental Cost - Manual Svc Order		ψ3,124.11	ψ093.04	ψ103.70	ψ130.07	ψ130.07
D.8.3	vs. Electronic			\$36.84	\$36.84	\$109.04	\$105.91
D.9	INTEROFFICE TRANSPORT - DEDICATED - OC48						
D.9.1	Interoffice Transport - Dedicated - OC48 - Per Mile		\$26.52				
D.9.2	Interoffice Transport - Dedicated - OC48 - Facility Termination		\$13,229.11	\$893.84	\$163.78	\$109.04	\$105.91
	Interoffice Transport - Dedicated - OC48 - Incremental Cost - Manual Svc.						
D.9.3	Order vs. Electronic			\$36.84	\$36.84	\$19.01	\$19.01
D.9.4	Interoffice Transport - Dedicated - OC48 - Interface OC12 on OC48			\$382.12	\$163.78	\$109.04	\$105.91
	Interoffice Transport - OC48 Interface - Incremental Cost-Manual Svc Order vs						
D.9.5	Elec			\$36.84	\$36.84	\$19.01	\$19.01
D.10	INTEROFFICE TRANSPORT - DEDICATED - STS-1						
D.10.1	Interoffice Transport - Dedicated - STS-1 - Per Mile		\$2.34				
D.10.2	Interoffice Transport - Dedicated - STS-1 - Facility Termination		\$849.30	\$395.29	\$176.56	\$109.04	\$105.91
D.10.3	Interoffice Transport - STS-1 - Incremental Cost - Manual Svc Order vs. Electronic			\$36.84	\$36.84	\$19.01	\$19.01

				Nonrec	urring	Disconnect		
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional	
D.12	INTEROFFICE TRANSPORT - DEDICATED - 4-WIRE VOICE GRADE							
D.12.1	Interoffice Transport - Dedicated - 4-Wire Voice Grade - Per Mile		\$0.0054					
D.12.2	Interoffice Transport - Dedicated - 4-Wire Voice Grade - Facility Termination		\$24.09	\$37.87	\$26.02	\$30.78	\$13.07	
	Interoffice Transpor t- Dedicated - 4-Wire VG-Incremental Cost-Manual Svc		·			·		
D.12.3	Order vs Elec			\$15.08	\$15.08	\$8.66	\$8.66	
E.0	SIGNALING NETWORK, DATA BASES, & SERVICE MANAGEMENT SYS.							
E.3	CCS7 SIGNALING TRANSPORT							
E.3.7	CCS7 Signaling Connection, Per link (A link) (Same as E.3.1)		\$17.84	\$130.84				
	CCS7 Signaling Connection, Per link (B link) (also known as D link)(Same as							
E.3.8	E.3.1)		\$17.84	\$130.84				
E.3.9	CCS7 Signaling Usage, Per ISUP Message(Same as E.3.3)		\$0.0000373					
E.3.10	CCS7 Signaling Usage Surrogate, per link per LATA per mo (9)(Same as E.3.5)		\$352.30					
E.3.11	CCS7 Signaling Point Code, Establishment or Change, per STP affected		·	\$121.77				
E.4	BELLSOUTH CALLING NAME (CNAM) DATABASE (DB) SERVICE							
E.4.1	CNAM for DB Owners - Service Establishment, Manual			\$43.27		\$39.79		
E.4.2	CNAM for Non DB Owners - Service Establishment, Manual			\$43.27	(0)	\$39.79	(2)	
E.4.3	CNAM for DB Owners Service Provisioning with Point Code Establishment			(I) \$1,868	(S) \$1,382	(I) \$507.09	(S) \$372.80	
E.4.4	CNAM for Non DB Owners Service Provisioning with Point Code Establishment			(I) \$645.50	(S) \$462.23	(I) \$519.01	(S) \$372.86	
E.4.5	CNAM for DB and Non DB Owners, Per Query		\$0.0010541					
E.5	BELLSOUTH ACCESS TO 911 SERVICE							
	BellSouth E911 Access - Local Channel - Dedicated - 2-wire Voice Grade							
E.5.1	(Same as D.5.1)	1	\$17.18		\$24.16		\$4.80	
		3	\$22.44	\$199.33	\$24.16	\$54.81 \$54.81	\$4.80	
	BellSouth E911 Access - Interoffice Transport - Dedicated - 2-wire Voice Grade	3	\$29.34	\$199.33	\$24.16	\$54.81	\$4.80	
E.5.2	Per Mile (Same as D.2.1)		\$0.02					
2.0.2	BellSouth E911 Access - Interoffice Transport - Dedicated - 2-wire VG Facility		Ψ0.02					
E.5.3	Term (Same as D.2.2)		\$18.58	\$55.39	\$17.37	\$27.96	\$3.5	
E.5.4	BellSouth E911 Access - Local Channel - Dedicated - DS1 (Same as D.5.3)	1	\$36.24		\$233.26		\$22.3	
		2	\$47.33	\$277.35	\$233.26		\$22.30	
		3	\$61.89	\$277.35	\$233.26	\$33.18	\$22.30	
E.5.5	BellSouth E911 Access - Interoffice Transport - Dedicated - DS1 Per Mile (Same as D.4.1)		\$0.36					
E.5.6	BellSouth E911 Access - Interoffice Transport - Dedicated - DS1 Per Facility Termination (Same as D.4.2)		\$77.86	\$112.40	\$76.27	\$19.55	\$14.99	
L.U.U	terminates. (earlie de Britz)		ψ11.00	ψ112. <del>4</del> 0	ψι υ.Ζι	ψ10.00	Ψ14.3	

				Non	ecurring		Disco	nnect
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additi	ional	First	Additional
E.6	LNP QUERY SERVICE		<b>#</b> 0.000077					
E.6.1	LNP Cost Per query		\$0.0009277					
E.6.2	LNP Service Establishment Manual			\$23.0		*·-·	\$21.71	(0)
E.6.3	LNP Service Provisioning with Point Code Establishment			(I) \$1,1°	9 (S)	\$571.71	(I) \$507.09	(S) \$372.86
G.0	SELECTIVE ROUTING							
G.11	SELECTIVE CARRIER ROUTING (AIN SOLUTION)							
G.11.1	Service Establishment per CLEC			\$190,63			\$16,200	
G.11.2	Service Establishment per End Office			\$317.	55		\$3.19	
G.11.4	Query Cost		\$0.0206047					
H.0	COLLOCATION							
H.3	ASSEMBLY POINT							
H.3.1	Assembly Point: 2-Wire Cross Connects		\$1.29	\$11.0	)3	\$10.09	\$11.29	\$10.19
H.3.2	Assembly Point: 4-Wire Cross Connects		\$2.22	\$11.2	21	\$10.22	\$11.58	\$10.40
H.3.3	Assembly Point: DS-1 Cross Connects		\$12.77	\$28.3	30	\$16.79	\$11.61	\$10.50
H.3.4	Assembly Point 2-Wire Cross Connect Incremental Cost Manual vs. Electronic Service Order			\$1.8	37	\$1.87	\$1.13	\$1.13
H.3.5	Assembly Point 4-Wire Cross Connect Incremental Cost Manual vs. Electronic Service Order			\$1.8	37	\$1.87	\$1.16	\$1.16
H.3.6	Assembly Point DS1 Cross Connect Incremental Cost Manual vs. Electronic Service Order			\$1.8	37	\$1.87	\$1.16	\$1.16
H.6	PHYSICAL COLLOCATION IN THE REMOTE TERMINAL (RT)							
H.6.1	Physical Collocation In The Remote Terminal - Application Fee			\$580.2	20		\$312.76	
H.6.2	Physical Collocation In The Remote Terminal - Per Rack/Bay		\$220.41	+-3			, , , ,	
H.6.3	Physical Collocation In The Remote Terminal - Security Access Key		, , ,	\$24.6	69			
110.4	Physical Collocation in the RT - Space Availability Report per premises							
H.6.4	requested			\$218.4	19			
H.6.5	Physical Collocation in the RT- Remote Site CLLI Code Request, per CLLI Code Requested			\$70.8	31			

				Nonrec	urring	Disco	nnect
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional
J.0	OTHER						
J.1	DARK FIBER						
J.1.2	Dark Fiber, Per Four Fiber Strands, Per Route Mile or Fraction Thereof - Local Channel/Loop		\$58.83	\$1,121	\$153.19	\$580.26	\$357.17
J.1.3	Dark Fiber, Per Four Fiber Strands, Per Route Mile or Fraction Thereof - Interoffice		\$28.74	\$1,121	\$153.19	\$580.26	\$357.17
J.3	LOOP MAKE-UP						
J.3.1	Mechanized Loop Make-up		\$0.7644187				
J.3.3	Manual Loop Make-up w/o Facility Reservation Number		·	\$74.46			
J.3.4	Manual Loop Make-up w/ Facility Reservation Number			\$77.18			
J.4	LINE SHARING SPLITTER IN THE CENTRAL OFFICE						
J.4.1	Line Sharing Splitter - per Splitter System 96-Line Capacity in the Central Office		\$183.79	371.63		349.37	
J.4.2	Line Sharing Splitter - per Splitter System 24-Line Capacity in the Central Office		\$45.95	371.63		349.37	
J.4.3	Line Sharing Splitter - per Line Activation in the Central Office		\$8.70	\$39.39	\$15.70	\$35.06	\$10.79
J.4.4	Line Sharing Splitter - per Subsequent Activity per Line Arrangement		\$0.27	\$34.56	\$12.62	\$16.43	\$1.64
J.4.6	Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per LSOD)			\$108.66		\$82.12	
J.4.7	Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per order for J.4.7)			\$54.40		\$10.59	
0.4.7	Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per			ψ0+.+0	l	ψ10.55	
J.4.8	occurrence of each group of 24 lines (48 pairs))			(S	s) \$15.63	(	S) \$18.2
J.5	ACCESS TO THE DCS						
J.5.1	Customer Reconfiguration Establishment			\$2.78		\$3.32	
J.5.2	DS1 DCS Termination with DS0 Switching		\$23.35	\$41.14	\$34.25	\$29.94	\$24.08
J.5.3	DS1 DCS Termination with DS1 Switching		\$13.46	\$27.79	\$20.90	\$21.99	\$16.12
J.5.4	DS3 DCS Termination with DS1 Switching		\$150.88	\$41.14	\$34.25	\$29.94	\$24.08
L.0	ACCESS DAILY USAGE FILE (ADUF)						
L.1	ACCESS DAILY USAGE FILE (ADUF)						
L.1.1	ADUF, Message Processing, per message		\$0.0158054				
L.1.3	ADUF, Data Transmission (CONNECT:DIRECT), per message		\$0.0001387				
M.0	DAILY USAGE FILES						
M.1	ENHANCED OPTIONAL DAILY USAGE FILE						
M.1.1	Enhanced Optional Daily usage File: Message Processing, Per Message		\$0.2921174				

				Nonrec	urring	Disco	nnect
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional
P.0	UNBUNDLED LOOP COMBINATIONS						
P.13	EXTENDED 4-WIRE DS1 DIGITAL LOOP WITH DEDICATED DS3 INTEROFFICE TRANSPORT						
P.13-1	First DS1 in DS3	1	\$1,153.26				
1.10-1	1 1131 201 111 203	2	\$1,170.93				
		3	\$1,194.12				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.12
	Nonrecurring - EXTENDED 4-WIRE DS1 DIGITAL LOOP WITH DEDICATED DS3 INTEROFFICE TRANSPORT- NEW			\$965.91	\$400.64	\$161.42	\$67.08
P.13-2	D.6.1 Interoffice Transport - Dedicated - DS3 - Per Mile		\$2.34				
P.13-3	Additional DS1 in same DS3	1	\$75.45				
		2	\$93.12				
		3	\$116.31				
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		
P.16	2-WIRE LOOP/ 2 WIRE VOICE GRADE IO TRANSPORT/ 2 WIRE PORT						
P.16-1	Fixed - Switch as is	1	\$40.00	\$11.18	\$3.52		
-		2	\$45.07	\$11.18	\$3.52		
		3	\$51.72	\$11.18	\$3.52		
P.16.2	D.2.1 Interoffice Transport - Dedicated - 2-Wire Voice Grade - Per Mile		\$0.0174				
P.23	EXTENDED 2-WIRE VOICE GRADE LOOP/ 2 WIRE VOICE GRADE INTEROFFICE TRANSPORT						
P.23-1	Fixed	1	\$38.35				
		3	\$43.42 \$50.07				
			φου.στ				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.12
	Nonrecurring - EXTENDED 2-WIRE VOICE GRADE LOOP/ 2 WIRE VOICE GRADE INTEROFFICE TRANSPORT - NEW			\$251.11	\$100.39	\$142.26	\$41.86
P.23-2	D.2.1 Interoffice Transport - Dedicated - 2-Wire Voice Grade - Per Mile		\$0.0174				

			_	Nonrec	urring	Disco	nnect
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional
P.24	EXTENDED 4-WIRE VOICE GRADE LOOP/ 4 WIRE VOICE GRADE INTEROFFICE TRANSPORT						
P.24-1	Fixed	1	\$52.00				
1.271	i iku	2	\$59.56				
		3	\$69.48				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.1
	Nonrecurring - EXTENDED 4-WIRE VOICE GRADE LOOP/ 4 WIRE VOICE GRADE INTEROFFICE TRANSPORT - NEW			\$251.11	\$100.39	\$142.26	\$41.8
P.24-2	D.12.1 Interoffice Transport - Dedicated - 4-Wire Voice Grade - Per Mile		\$0.0054				
P.25	EXTENDED DS3 DIGITAL LOOP WITH DEDICATED DS3 INTEROFFICE TRANSPORT						
P.25-1	Fixed		\$1,228.44				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.1
	Nonrecurring - EXTENDED DS3 DIGITAL LOOP WITH DEDICATED DS3 INTEROFFICE TRANSPORT - NEW			\$784.76	\$355.52	\$171.21	\$80.6
P.25-2	D.6.1 Interoffice Transport - Dedicated - DS3 - Per Mile		\$2.34				
P.25-3	A.16.2 High Capacity Unbundled Local Loop - DS3 - Per Mile		\$9.19				
P.26	EXTENDED STS1 DIGITAL LOOP WITH DEDICATED STS1 INTEROFFICE TRANSPORT						
P.26-1	Fixed		\$1,243.86				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.1
	Nonrecurring - EXTENDED STS1 DIGITAL LOOP WITH DEDICATED STS1 INTEROFFICE TRANSPORT - NEW			\$784.76	\$355.52	\$171.21	\$80.6
P-26-2	D.10.1 Interoffice Transport - Dedicated - STS-1 - Per Mile		\$2.34				
P.26-3	A.16.16 High Capacity Unbundled Local Loop - STS-1 - Per Mile		\$9.19				

				Nonrec	urring	Disconnect	
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional
P.50	4-WIRE DS1 LOOP WITH CHANNELIZATION WITH PORT						
P.50.VG-1	First Voice Grade in DS1 - Switch as is	1	\$196.36	\$303.61	\$15.74		
		2	\$214.03	\$303.61	\$15.74		
		3	\$237.22	\$303.61	\$15.74		
P.50.VG-2	Additional Voice Grade in same DS1		\$6.51				
P.50.DID-1	First 2-Wire DID in DS1 - Switch as is	1	\$201.23	\$303.61	\$15.74		
		2	\$218.90	\$303.61	\$15.74		
		3	\$242.09	\$303.61	\$15.74		
P.50.DID-2	Additional 2-Wire DID in same DS1		\$11.13				
P.50.ISDN-1	First ISDN in DS1 - Switch as is	1	\$212.36	\$303.61	\$15.74		
		2	\$230.03	\$303.61	\$15.74		
		3	\$253.22	\$303.61	\$15.74		
P.50.ISDN-2	Additional ISDN in same DS1		\$22.51				
P.50.4	4-Wire DS1 Loop/Channelization Port Combination - Subsequent Activity - Add Lines - Per Line			\$89.90			
P.50.5	4-Wire DS1 Loop/Channelization Port Combination - Subsequent Activity - Add Trunks - Per Trunk			\$117.43			
P.51	EXTENDED 2-WIRE ISDN LOOP WITH DS1 INTEROFFICE TRANSPORT						
P.51-1	First 2-Wire ISDN in DS1	1	\$188.66				
		2	\$195.46				
		3	\$204.39				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.12
	Nonrecurring - EXTENDED 2-WIRE ISDN LOOP WITH DS1 INTEROFFICE TRANSPORT - NEW			\$485.24	\$198.75	\$146.05	\$44.50
P.51-2	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$0.3562				
P.51-3	Additional 2-wire ISDN in same DS1	1	\$25.46				
		3	\$32.26 \$41.19				
			¥5				
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		

				Nonrec	urring	Disconnect	
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional
	EXTENDED 4-WIRE DS1 DIGITAL LOOP WITH DEDICATED STS-1						
<b>P.52</b> P.52-1	INTEROFFICE TRANSPORT First in DS1 in STS1	4	¢4.447.50				
P.52-1	FIISUII DOT III OTOT	2	\$1,147.59 \$1,165.26				
		3	\$1,188.45				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.12
	Nonrecurring - EXTENDED 4-WIRE DS1 DIGITAL LOOP WITH DEDICATED STS-1 INTEROFFICE TRANSPORT - NEW			\$965.91	\$400.64	\$161.42	\$67.08
P.52-2	D.10.1 Interoffice Transport - Dedicated - STS-1 - Per Mile		\$2.34				
P.52-3	Additional DS1 in same STS1	1	\$75.31				
		2	\$92.98				
		3	\$116.17				
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		
	EXTENDED 2-WIRE VOICE GRADE LOOP WITH DEDICATED DS1						
P.53 P.53-1	INTEROFFICE TRANSPORT W/ 3/1 MUX First 2-Wire VG in First DS1 in DS3	1	\$416.86				
F.33-1	I list 2-vviie vo ii i list bot iii bos	2	\$421.93				
		3	\$428.58				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.12
	Nonrecurring - EXTENDED 2-WIRE VOICE GRADE LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX - NEW			\$485.24	\$198.75	\$146.05	\$44.50
P.53-2	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$0.3562				
			1				
P.53-3	Additional 2-Wire VG in same DS1	1	\$17.61				
		3	\$22.68 \$29.33				
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		

				Nonrec	urring	Disco	nnect
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional
P.53-4	Additional DS1 in same DS3		\$176.35				
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		
P.54	EXTENDED 4-WIRE VOICE GRADE LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX						
P.54-1	First 4-Wire VG in First DS1 in DS3	1	\$429.71				
		2	\$437.27				
		3	\$447.19				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.12
	Nonrecurring - EXTENDED 4-WIRE VOICE GRADE LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX - NEW			\$485.24	\$198.75	\$146.05	\$44.50
P.54-2	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$0.3562				
P.54-3	Additional 4-Wire VG in same DS1	1	\$25.75				
		2	\$33.31				
		3	\$43.23				
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		
P.54-4	Additional DS1 in same DS3		\$176.35				
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		

				Nonrec	urring	Discon	nect
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional
P.55	EXTENDED 4-WIRE 56 OR 64 KBPS DIGITAL LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX						
P.55-1	First 4-Wire in First DS1 in DS3	1	\$436.82				
		2	\$446.33				
		3	\$458.83			-	
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.12
	Nonrecurring - EXTENDED 4-WIRE 56 OR 64 KBPS DIGITAL LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX - NEW			\$485.24	\$198.75	\$146.05	\$44.50
P.55-2	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$0.3562				
P.55-3	Additional 4-Wire in same DS1	1	\$33.06				
		2	\$42.57				
		3	\$55.07				
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		
P.55-4	Additional DS1 in same DS3		\$176.35				
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		
P.56	EXTENDED 2-WIRE ISDN LOOP WITH DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX						
P.56-1	First 2-Wire in First DS1 in DS3	1	\$429.22				
		2	\$436.02				
		3	\$444.95				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.12
	Nonrecurring - EXTENDED 2-WIRE ISDN LOOP WITH DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX - NEW			\$485.24	\$198.75	\$146.05	\$44.50
P.56-2	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$0.3562				
P.56-3	Additional 2-Wire in same DS1	1	\$25.46				
		2	\$32.26				
		3	\$41.19				

				Nonrec	urring	Discor	nnect
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		
P.56-4	Additional DS1 in same DS3		\$176.35				
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		
P.57	EXTENDED 4-WIRE DS1 DIGITAL LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX						
P.57-1	First 4-Wire DS1 in DS3	1	\$380.86				
		2	\$398.53				
		3	\$421.72				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.1
	Nonrecurring - EXTENDED 4-WIRE DS1 DIGITAL LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX - NEW			\$485.24	\$198.75	\$146.05	\$44.5
P.57-2	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$0.3562				
P.57-3	Additional 4-Wire DS1 in same DS3	1	\$153.31				
		2	\$170.98				
		3	\$194.17				
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		
P.58	EXTENDED 4-WIRE 56 OR 64 KBPS DIGITAL LOOP WITH DS0 INTEROFFICE TRANSPORT						
P.58-1	Fixed	1	\$52.29				
		2	\$61.80				
		3	\$74.30				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.1
	Nonrecurring - EXTENDED 4-WIRE 56 OR 64 KBPS DIGITAL LOOP WITH DS0 INTEROFFICE TRANSPORT - NEW						
P.58-2	D.3.1 Interoffice Transport - Dedicated - DS0 - Per Mile		\$0.0174				

Cost Ref. No.	UNE Combination UNEs Included in Combination	Source of Rate (Cost Study Docket No.)	
P.13	4-Wire DS1 Digital Loop with Dedicated DS3 Interoffice Transport (EEL)		
A.9.1	4-Wire DS1 Digital Loop, per month	97-01262	
D.6.2	Interoffice Transport – Dedicated – DS3 - Facility Termination, per month	00-00544	
D.6.1	Interoffice Transport – Dedicated – DS3 - Per mile, per month	00-00544	
P.17.1	Nonrecurring – Switch-as-is	97-01262	
	Nonrecurring – New	00-00544	
P.16	2-Wire Voice Grade Loop with 2-Wire Voice Grade Interoffice Transport with 2-Wire Port		
A.1.2	2-Wire Analog Voice Grade Loop – Service Level 2, per month	97-01262	
D.2.2	Interoffice Transport - Dedicated - 2-Wire Voice Grade - Facility Termination, per month	97-01262	
D.2.1	Interoffice Transport – Dedicated - 2-Wire Voice Grade - Per mile, per month	97-01262	
B.1.1	2-Wire Analog Line Port, per month	97-01262	
	Nonrecurring – Switch-as-is	00-00544	
7.22			
P.23	2-Wire Voice Grade Loop with 2-Wire Voice Grade Interoffice Transport (EEL)		
A.1.2	2-Wire Voice Grade Loop – Service Level 2, per month		
D.2.2	Interoffice Transport – Dedicated - 2-Wire Voice Grade - Facility Termination, per month		
D.2.1	Interoffice Transport – Dedicated – 2-Wire Voice Grade - Per mile, per month	97-01262	
P.17.1	Nonrecurring – Switch-as-is	97-01262	
	Nonrecurring – New	00-00544	

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Cost Ref. No.	UNE Combination UNEs Included in Combination	Source of Rate (Cost Study Docket No.)	
P.24	4-Wire Voice Grade Loop with 4-Wire Voice Grade Interoffice Transport (EEL)		
A.4.1	4-Wire Analog Voice Grade Loop, per month	97-01262	
D.12.2	Interoffice Transport – Dedicated - 4-Wire Voice Grade - Facility Termination, per month	00-00544	
D.12.1	Interoffice Transport – Dedicated - 4-Wire Voice Grade - Per mile, per month	00-00544	
P.17.1	Nonrecurring – Switch-as-is	97-01262	
	Nonrecurring – New	00-00544	
P.25	DS3 Digital Loop with Dedicated DS3 Interoffice Transport (EEL)		
A.16.1	High Capacity Unbundled Local Loop – DS3 – Facility Termination, per month	00-00544	
D.6.2	Interoffice Transport – Dedicated – DS3 – Facility Termination, per month	00-00544	
A.16.2	High Capacity Unbundled Local Loop – DS3 – Per mile, per month	00-00544	
D.6.1	Interoffice Transport – Dedicated – DS3 – Per mile, per month	00-00544	
P.17.1	Nonrecurring – Switch-as-is	97-01262	
	Nonrecurring – New	00-00544	
P.26	STS-1 Digital Loop with Dedicated STS-1 Interoffice Transport (EEL)		
A.16.15	High Capacity Unbundled Local Loop – STS-1 – Facility Termination, per month	00-00544	
D.10.2	Interoffice Transport – Dedicated – STS-1 – Facility Termination, per month	00-00544	
A.16.16	High Capacity Unbundled Local Loop – STS-1 – Per mile, per month	00-00544	
D.10.1	Interoffice Transport – Dedicated – STS-1 – Per mile, per month	00-00544	
P.17.1	Nonrecurring – Switch-as-is	97-01262	
	Nonrecurring – New	00-00544	

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Cost Ref. No.	UNIE Combination	Source of Rate
	UNE Combination UNEs Included in Combination	(Cost Study Docket No.)
P.50	4-Wire DS1 Loop with Channelization with Port	,
A.9.1	4-Wire DS1 Digital Loop, per month	97-01262
B.1.1/B.1.3/B.1.5	2-Wire Voice Grade/DID/ISDN Line Port, per month	97-01262
Q.1.1	D4 Channel Bank Inside CO – System, per month	00-00544
Q.1.4/Q.1.3	Unbund led Loop Concentration – POTS Card/ISDN BRITE Card, per month	00-00544
	Nonrecurring – Switch-as-is	00-00544
	Nonrecurring – Subsequent Activity – Add Lines, per line	00-00544
	Nonrecurring – Subsequent Activity – Add Trunks, per trunk	00-00544
P.51	2-Wire ISDN Digital Loop with DS1 Interoffice Transport (EEL)	
A.5.1	2-Wire ISDN Digital Grade Loop, per month	97-01262
D.4.2	Interoffice Transport – Dedicated – DS1 – Facility Termination, per month	97-01262
D.4.1	Interoffice Transport – Dedicated – DS1 – Per mile, per month	97-01262
A.18.1	Channelization – Channel System DS1 to DS0, per month	97-01262
A.18.3	Interface Unit, Interface DS1 to DS0 – BRITE Card, per month	97-01262
P.17.1	Nonrecurring – Switch-as-is	97-01262
	Nonrecurring – New	00-00544
	Nonrecurring – New Feature Activation for Combination Use Only	00-00544
P.52	4-Wire DS1 Digital Loop with Dedicated STS-1 Interoffice Transport (EEL)	
A.9.1	4-Wire DS1 Digital Loop, per month	97-01262
D.10.2	Interoffice Transport – Dedicated – STS-1 – Facility Termination, per month	00-00544
D.10.1	Interoffice Transport – Dedicated – STS-1 – Per mile, per month	97-01262
A.18.5	Channelization – Channel System DS3 to DS1, per month	97-01262
A.18.6	Interface Unit – Interface DS3 to DS1, per month	97-01262
P.17.1	Nonrecurring – Switch-as-is	97-01262
	Nonrecurring – New	00-00544
	Nonrecurring – New Feature Activation for Combination Use Only	00-00544

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Cost Ref. No.	UNE Combination UNEs Included in Combination	Source of Rate	
		(Cost Study Docket No.)	
P.53	2-Wire Voice Grade Loop with Dedicated DS1 Interoffice Transport with 3/1 MUX (EEL)		
A.1.2	2-Wire Analog Voice Grade Loop – Service Level 2, per month	97-01262	
D.4.2	Interoffice Transport – Dedicated – DS1 – Facility Termination, per month	97-01262	
D.4.1	Interoffice Transport – Dedicated – DS1 – Per mile, per month	97-01262	
A.18.5	Channelization – Channel System DS3 to DS1, per month	97-01262	
A.18.6	Interface Unit – Interface DS3 to DS1, per month	97-01262	
A.18.1	Channelization – Channel System DS1 to DS0, per month	97-01262	
A.18.4	Interface Unit – Interface DS1 to DS0 – Voice Grade Card, per month	97-01262	
P.17.1	Nonrecurring – Switch-as-is	97-01262	
	Nonrecurring – New	00-00544	
	Nonrecurring – New Feature Activation for Combination Use Only	00-00544	
P.54	4-Wire Voice Grade Loop with Dedicated DS1 Interoffice Transport with 3/1 MUX (EEL)		
A.4.1	4- Wire Analog Voice Grade Loop, per month	97-01262	
D.4.2	Interoffice Transport – Dedicated – DS1 – Facility Termination, per month	97-01262	
D.4.1	Interoffice Transport – Dedicated – DS1 – Per mile, per month	97-01262	
A.18.5	Channelization – Channel System DS3 to DS1, per month	97-01262	
A.18.6	Interface Unit – Interface DS3 to DS1, per month	97-01262	
A.18.1	Channelization – Channel System DS1 to DS0, per month	97-01262	
A.18.4	Interface Unit – Interface DS1 to DS0 – Voice Grade Card, per month	97-01262	
P.17.1	Nonrecurring – Switch-as-is	97-01262	
	Nonrecurring – New	00-00544	
	Nonrecurring – New Feature Activation for Combination Use Only	00-00544	

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Cost Ref. No.	UNE Combination UNEs Included in Combination	Source of Rate	
P.55	4-Wire 56 or 64 Kbps Digital Loop with Dedicated DS1 Interoffice Transport with 3/1 MUX (EEL)		
A.10.1	4-Wire 19, 56 or 64 Kbps Digital Grade Loop, per month	97-01262	
D.4.2	Interoffice Transport – Dedicated – DS1 – Facility Termination, per month	97-01262	
D.4.1	Interoffice Transport – Dedicated – DS1 – Per mile, per month	97-01262	
A.18.5	Channe lization – Channel System DS3 to DS1, per month	97-01262	
A.18.6	Interface Unit – Interface DS3 to DS1, per month	97-01262	
A.18.1	Channelization – Channel System DS1 to DS0, per month	97-01262	
A.18.4	Interface Unit – Interface DS1 to DS0 – OCU-DP Card, per month	97-01262	
P.17.1	Nonrecurring – Switch-as-is	97-01262	
	Nonrecurring – New	00-00544	
	Nonrecurring – New Feature Activation for Combination Use Only	00-00544	
P.56	2-Wire ISDN Loop with DS1 Interoffice Transport with 3/1 MUX (EEL)		
A.5.1	2-Wire ISDN Digital Grade Loop, per month	97-01262	
D.4.2	Interoffice Transport – Dedicated – DS1 – Facility Termination, per month	97-01262	
D.4.1	Interoffice Transport – Dedicated – DS1 – Per mile, per month	97-01262	
A.18.5	Channelization – Channel System DS3 to DS1, per month	97-01262	
A.18.6	Interface Unit – Interface DS3 to DS1, per month	97-01262	
A.18.1	Channelization – Channel System DS1 to DS0, per month	97-01262	
A.18.4	Interface Unit – Interface DS1 to DS0 – BRITE Card, per month	97-01262	
P.17.1	Nonrecurring – Switch-as-is	97-01262	
	Nonrecurring – New	00-00544	
	Nonrecurring – New Feature Activation for Combination Use Only	00-00544	

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Cost Ref. No.	UNE Combination UNEs Included in Combination	Source of Rate	
	CIVE combination	(Cost Study Docket No.)	
P.57	4-Wire DS1 Digital Loop with Dedicated DS1 Interoffice Transport with 3/1 MUX (EEL)		
A.9.1	4-Wire DS1 Digital Loop, per month	97-01262	
D.4.2	Interoffice Transport – Dedicated – DS1 – Facility Termination, per month	97-01262	
D.4.1	Interoffice Transport – Dedicated – DS1 – Per mile, per month	97-01262	
A.18.5	Channelization – Channel System DS3 to DS1, per month	97-01262	
A.18.6	Interface Unit – Interface DS3 to DS1, per month	97-01262	
P.17.1	Nonrecurring – Switch-as-is	97-01262	
	Nonrecurring – New	00-00544	
	Nonrecurring – New Feature Activation for Combination Use Only	00-00544	
P.58	A Wine 56 on 64 What Digital I can with DS0 Interesting Transport (EEI)		
	4-Wire 56 or 64 Kbps Digital Loop with DS0 Interoffice Transport (EEL)	07.01070	
A.10.1	4-Wire 19, 56 or 64 Kbps Digital Grade Loop, per month		
D.3.2	Interoffice Transport – Dedicated – DS0 – Facility Termination, per month	97-01262	
D.3.1	Interoffice Transport – Dedicated – DS0 – Per mile, per month	97-01262	
P.17.1	Nonrecurring – Switch-as-is	97-01262	
	Nonrecurring – New	00-00544	

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1		BELLSOUTH TELECOMMUNICATIONS, INC.
2		DIRECT TESTIMONY OF W. KEITH MILNER
3		BEFORE THE TENNESSEE REGULATORY AUTHORITY
4		DOCKET NO. 00-00544
5		NOVEMBER 13, 2000
6		
7	Q.	PLEASE STATE YOUR NAME, YOUR BUSINESS ADDRESS, AND
8		YOUR POSITION WITH BELLSOUTH TELECOMMUNICATIONS, INC.
9		(BELLSOUTH).
10		
11	A.	My name is W. Keith Milner. My business address is 675 West Peachtree
12		Street, Atlanta, Georgia 30375. I am Senior Director - Interconnection
13		Services for BellSouth. I have served in my present role since February
14		1996, and have been involved with the management of certain issues
15		related to local interconnection, resale, and unbundling.
16		
17	Q.	PLEASE SUMMARIZE YOUR BACKGROUND AND EXPERIENCE.
18		
19	A.	My business career spans over 30 years and includes responsibilities in
20		the areas of network planning, engineering, training, administration, and
21		operations. I have held positions of responsibility with a local exchange
22		telephone company, a long distance company, and a research and
23		development company. I have extensive experience in all phases of
24		telecommunications network planning, deployment, and operations in both
25		the domestic and international arenas.

1		
2		I graduated from Fayetteville Technical Institute in Fayetteville, North
3		Carolina, in 1970, with an Associate of Applied Science in Business
4		Administration degree. I later graduated from Georgia State University in
5		1992 with a Master of Business Administration degree.
6		
7	Q.	HAVE YOU TESTIFIED PREVIOUSLY BEFORE ANY STATE PUBLIC
8		SERVICE COMMISSION, AND IF SO, BRIEFLY DESCRIBE THE
9		SUBJECT OF YOUR TESTIMONY?
10		
11	A.	I have previously testified before the state public service commissions in
12		Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, and South
13		Carolina, the Tennessee Regulatory Authority, and the Utilities
14		Commission in North Carolina on the issues of technical capabilities of the
15		switching and facilities network regarding the introduction of new service
16		offerings, expanded calling areas, unbundling, and network
17		interconnection.
18		
19	Q.	WHAT IS THE PURPOSE OF YOUR TESTIMONY BEING FILED
20		TODAY?
21		
22	A.	In my testimony, I will address the technical aspects of specific network-
23		related issues such as loop deployment, XDSL loop offerings, line sharing,
24		access to unbundled sub-loop elements, and customized routing.

### **UNE Loop Deployment**

2

1

Q. PLEASE PROVIDE THE NETWORK TECHNOLOGY ASSUMPTIONS
 USED IN DEVELOPING THE UNE LOOP COST STUDY.

5

A. The network infrastructure design in the loop cost methodology starts with two basic assumptions. First, loops up to 12,000 feet long (measured from the central office) are designed using only twisted pair copper facilities. Second, loops longer than 12,000 feet are provisioned using fiber optic cable loop feeder facilities and Next Generation Digital Loop Carrier (NGDLC).

12

13 Q. PLEASE EXPLAIN WHY FIBER LOOP FEEDER FACILITIES ARE USED
14 IN CONJUNCTION WITH DIGITAL LOOP CARRIER RATHER THAN
15 ONLY TWISTED PAIR COPPER FACILITIES FOR LOOPS LONGER
16 THAN 12,000 FEET.

17

Α. In BellSouth's costing methodology for voice grade (or "narrowband") 18 19 services, costs were developed for loops of increasing length using both copper cable facilities and fiber fed digital loop carrier. Depending on the 20 type of construction (that is, aerial versus buried cable) and the volume of 21 demand (cable size or NGDLC size), the economic crossover distance 22 (that is, the point at which loops provisioned using DLC is more 23 24 economically efficient than using copper cable loops) for voice grade 25 services is approximately 12,000 feet from the central office.

It should be noted that, in actual network design, voice grade services are mixed with demand for other types of service such as DS-1 services and other higher bandwidth services. In selecting the infrastructure design for a network to meet all of these demands, new copper cable is rarely the facility of choice for the loop feeder network. Instead, fiber cable with fiber optic multiplexers and NGDLC are used to meet the combined demand on the cable route.

Q. WHERE FIBER FED NGDLC IS PROVISIONED, PLEASE EXPLAIN
WHAT DESIGN CRITERIA ARE USED TO DETERMINE THE DESIGN
OF THE CABLE PLANT EXTENDING FROM THE NGDLC TO THE
CUSTOMER LOCATION.

Α.

Carrier Serving Area (CSA) design provides the rules for provisioning the cable plant extending from the NGDLC to the customer location. This part of the loop is referred to as loop distribution. CSA design rules limit the total loop distribution length from the NGDLC site to the customer to 12,000 feet. Included in this 12,000 feet may be a maximum of 2,500 feet of bridged tap. No single bridged tap may be longer than 2,000 feet. The concept of bridged tap itself is discussed later in this testimony.

Q. PLEASE EXPLAIN THE BENEFIT OF USING THE CARRIER SERVING AREA DESIGN.

The economics that limit copper cable deployment distances from the central office to the customer location are the same as those that limit copper cable deployment from the NGDLC to the customer location (that is, the part of the loop referred to as loop distribution). In addition to the economic benefits derived from the CSA design itself, the 12,000 foot maximum copper cable length makes copper loops compatible with many of the digital subscriber line (DSL) technologies used today in providing advanced services.

Α.

Q. WHAT IS THE DIFFERENCE BETWEEN NGDLC AND OTHER FORMS
OF DIGITAL LOOP CARRIER (DLC)?

Α.

NGDLC describes a newer version of digital loop carrier equipment that provides many enhanced services and cost-reducing features that are not available on the older DLC systems. NGDLC systems are designed to support a larger capacity of lines, up to 2,016, from a single common equipment set compared to older vintages of DLC. For example, the larger capacity of NGDLC is a significant improvement over the 96-line capacity of the older vintage DLC referred to as "SLC-96", manufactured by Lucent Technologies.

Older vintage DLC cannot mix switched circuits and non-switched circuits within a 96-line group economically and can only use integrated central office alternatives economically when the 96-line group consists almost entirely of switched circuits. In contrast, NGDLC remote terminals can be

configured on a circuit by circuit basis using integrated or non-integrated central office alternatives to provide switched and non-switched services.

In providing switched services, NGDLC can be integrated with the local digital switch directly without intervening interface equipment. In this mode of operation, traffic from the remote NGDLC site to the central office can be concentrated onto only the number of circuits required by the types of services provisioned from that site. Typically, residential services can be concentrated at a 4:1 ratio. This means that, on average, only one (1) line of capacity is required from the NGDLC site to the switch for each of four (4) residential lines served from the NGDLC. For business services the typical concentration ratio is 3:1. The actual concentration ratio chosen for a given application is a function of the traffic load to be carried by the NGDLC equipment. The higher the traffic load, the lower the concentration ratio. Stated another way, the higher the traffic load, the more transmission paths required between the NGDLC equipment to the central office switching equipment.

In the older DLC systems, when DLC is integrated with the switch, it can be configured with either no concentration or with 2:1 concentration. In either circumstance, older DLC systems use more feeder capacity per line than do NGDLC systems since the use of NGDLC allows higher concentration ratios (and thus less loop feeder capacity) than older vintages of DLC.

In providing non-switched services, NGDLC has the capability, on a line-by-line basis, to provision remote NGDLC lines through the non-integrated or "universal" capacity of the NGDLC central office terminal. This allows non-switched services to be routed around the central office switch to connect with the other customer locations of the non-switched services or to interconnect with another telecommunications carrier's facilities. Since these services are not switched, concentration is not feasible.

Q. WHY IS NGDLC ASSUMED IN THE LOOP COST METHODOLOGY?

11 A. There are three reasons. First, the larger line capacity on the NGDLC

12 system achieves economies of scale, producing lower overall equipment

13 costs. Second, the capability to mix switched and non-switched services

14 on the same system eliminates wasted capacity, which improves the

15 economic benefit of using NGDLC. Finally, the combination of larger line

16 capacity and greater concentration capability reduces loop feeder capacity

17 requirements resulting in lower overall costs.

Q. IN DISCUSSING OLDER VINTAGE DLC AND NGDLC, YOU MENTION INTEGRATION WITH THE CENTRAL OFFICE SWITCH. PLEASE DESCRIBE THE PROCEDURES THAT ARE FOLLOWED TO MAKE INTERFACING WITH THE SWITCH POSSIBLE.

A. Two technical documents provide descriptions of digital loop carrier systems and how they interface with local digital switches in the integrated

configurations. The first document to be issued was Technical Reference-008 (TR-008). This document, authored by Bell Communications
Research, Inc. or "Bellcore" (now Telecordia), described the SLC-96 DLC system manufactured by AT&T before divestiture, and the document itself was jointly owned by AT&T and the Regional Bell Operating Companies (RBOCs) at divestiture. A major portion of that technical reference is still in use today and describes the interface that allows remote NGDLC/DLC to connect directly to a local digital switch at the DS-1 level in what is referred to as an integrated configuration.

This configuration allows lines to be provisioned with channelization circuit packs at the remote NGDLC/DLC but without per line circuit packs at the central office switch. TR-008 describes two alternatives for this integrated capability.

TR-008 Mode I is a non-concentrated alternative that requires feeder capacity for every line on a full time basis. When this alternative is used, four DS-1s (each with 24 channels for a total of 96 channels) are required for each 96-line capacity TR-008 remote NGDLC/DLC system. This configuration is used when high usage lines are to be served from the remote NGDLC/DLC system. TR-008 Mode II is a concentrated alternative that provides 2:1 concentration. When this alternative is used, two DS-1s (each with 24 channels for a total of 48 channels) are required for each 96-line capacity TR-008 remote NGDLC/DLC system.

Generic Requirement 303 (GR-303) (authored by Bellcore) provides a set of generic requirements that describe more flexible NGDLC system types and a more flexible interface to a local digital switch. The GR-303 interfaces for integrating NGDLC with a local digital switch can vary in line capacity from 48 lines to 2,016 lines. The concentration allowed over these interfaces is variable and can be matched to the services being made available from the remote NGDLC site to allow the most economic concentration ratio consistent with the service being provided.

While there are many variables that impact the decision of which switch termination type to use for the interface between a remote NGDLC site and the local digital switch, generally the most economic configurations are provided by using GR-303 for sites with more than 150 lines in the three to five year planning period. TR-008 is used for smaller remote NGDLC sites.

Q. PLEASE SUMMARIZE YOUR DISCUSSION OF BELLSOUTH'S POSITION ON UNE LOOP DEPLOYMENT.

Α.

BellSouth has designed and deployed its UNE loop infrastructure in an economic and rational manner using sound engineering principles.

Accordingly, the Authority should approve the resulting cost calculations and rates as presented in the testimonies of Ms. Caldwell and Mr. Ruscilli.

### **XDSL Loops**

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Q. PLEASE DESCRIBE BELLSOUTH'S UNBUNDLED XDSL LOOP
 OFFERING.

Α. High Bit-Rate Digital Subscriber Line (HDSL) Compatible Loop: The requirements for this type of loop are that the end user must be served by a non-loaded copper pair, and the loop typically cannot be more than 12,000 feet long on 24 gauge copper wire. If 26 gauge copper wire is used, the limit is 9,000 feet or less. In either case, the loop may have up to 2,500 feet of bridged tap with no single bridged tap exceeding 2,000 feet. The technical characteristics of the loop are verified to ensure that the loop meets stringent industry standards for CSA transmission specifications to support HDSL services.

Asymmetrical Digital Subscriber Line (ADSL) Compatible Loop: This type of loop is provided over copper facilities according to the Revised Resistance Design (RRD) industry standards, which means that the loop may be up to 18,000 feet long and may have up to 6,000 feet of bridged tap which is inclusive of the loop length. This means that for every foot of bridged tap, the loop length is reduced by an equal amount. Therefore, an RRD loop that has 4,000 feet of bridged tap could be no longer than 14,000 feet.

Originally the ADSL compatible loop was designed to the same CSA

criteria as the HDSL capable loop. However, in response to requests from CLECs, the specification for the loop was changed to the RRD standards during the first guarter of 2000.

BellSouth developed both the HDSL capable loop and the ADSL capable loop in response to the FCC's 96-325 Order, and both loop types have been available to CLECs since the fourth quarter of 1996.

<u>Unbundled Copper Loop (UCL)</u> – This type of loop provides a "dry" copper pair (that is, without electronic devices) to an end user using the Resistance Design (RD) industry standard. This loop may be up to 18,000 feet long and may have up to 6,000 feet of bridged tap, which is <u>exclusive</u> of the loop length. This means the loop length is not reduced by the bridged tap amount. Therefore, in some cases, the loop length may be 18,000 feet long and have up to 6,000 feet of bridged tap. BellSouth cannot ensure that these loops will function properly for DSL service since their physical characteristics may exceed the maximum distance for some DSL services and equipment. However, BellSouth will ensure that these loops have electrical continuity and balance relative to the tip and ring conductors.

The UCL has been available to CLECs since the second quarter of 1999.

As an additional offering, BellSouth has recently developed a new variant of UCL, the UCL Long (UCL-L) unbundled loop which is a copper loop that is longer than 18,000 feet. Typically applied telephony standards dictate

that all copper loops longer than 18,000 feet be "loaded" to properly serve dial-tone or "plain old telephone service" (POTS) type customers. In order to transform such loops into "dry" or "clean" copper loops, the CLEC would need to use BellSouth's Unbundled Loop Modifications (ULM) service offering to have any load coils and/or bridged tap removed from these loops. BellSouth witness Mr. John Ruscilli addresses the issue of rates for ULM in his testimony.

#### Q. DOES BELLSOUTH OFFER ANY ADDITIONAL XDSL LOOPS?

A. BellSouth offers its Integrated Services Digital Network (ISDN)-capable loop, and Universal Digital Channel (UDC)-capable loop. These two loop types are not specifically categorized as xDSL-capable loops, but they may support the DSL service known as Integrated Services Digital Network Digital Subscriber Line (IDSL). BellSouth provisions its ISDN-capable loops according to applicable industry standards which means they may be provisioned over copper facilities or via a DLC system. These loops are also free of any load coils, but are not referred to as "clean copper loops" because they may be provisioned via DLC systems, which are completely compatible with ISDN service. The UDC loop is the same as the ISDN-capable loop but is provisioned differently in a manner that supports "data-only" ISDN that will better meet the needs of CLECs that want to deploy IDSL.

### Q. WHAT IMPACT DOES LOOP LENGTH AND/OR THE PARTICULAR DSL

### TECHNOLOGY HAVE ON THE LOOP COST?

A. The usefulness of BellSouth's unbundled loops for the provisioning of DSL services depends on a variety of factors, including the end user's distance from the serving wire center, as well as the length and gauge of the copper wire that serves the customer. Significantly, the same copper loops that are used to provide DSL services are also utilized to provide voice service to BellSouth's customers, as well as to other CLECs' customers.

BellSouth ensures that the unbundled loops it provides meet appropriate technical standards. As the FCC recognized: "[p]rovision of xDSL service is subject to a variety of important technical constraints. One is the length of the subscriber loop: ADSL, the most widely deployed xDSL-based service, generally requires loops of less than 18,000 feet using current technology. Another is the quality of the loop, which must be free of excessive bridged taps, loading coils, and other devices commonly used to aid in the provision of analog voice and data transmission, but which interfere with the provision of xDSL services. 'Conditioning' loops to remove those impediments, or constructing fiber-based digital loop carrier systems to overcome loop length difficulties, can be expensive." See Third Report and Order in CC Docket No. 98-147, rel. Dec. 9, 1999, ¶ 8, n. 9 ("Line Sharing" Order).

Q. PLEASE SUMMARIZE YOUR TESTIMONY ON THE PROVISIONING OF

1		XDSL SERVICES.
2		
3	A.	The cost of provisioning unbundled loops that CLECs use to provide xDSL
4		services is a function of both the loop length and the particular DSL
5		technology to be deployed. As a result, it is appropriate for the cost study
6		for xDSL-compatible loops submitted with the testimony of Ms. Caldwell to
7		recognize distinctions based on loop length for the particular DSL
8		technology to be deployed.
9		
10	Line	Sharing
11		
12	Q.	WHAT IS LINE SHARING?
13		
14	A.	In its Third Report and Order in CC Docket No. 98-147 and Fourth Report
15		and order in CC Docket No. 96-98, released December 9, 1999, the FCC
16		states that "[t]he provision of XDSL-based service by a competitive LEC
17		and voiceband service by an incumbent LEC on the same loop is
18		frequently called 'line sharing'." (Order at ¶4)
19		
20	Q.	WHAT TECHNOLOGIES DOES BELLSOUTH UTILIZE IN ITS
21		DEPLOYMENT OF LINE SHARING?
22		
23	A.	Line sharing requires that a non-loaded, 2-wire copper loop serve the end
24		user. A non-loaded loop is a copper loop with no load coils, low-pass
25		filters, range extenders, or similar devices. For central office based line

sharing, the CLEC's meet point is the collocation point of termination.

BellSouth will use jumpers to connect the CLEC's connector block to the splitter. The splitter will route the high frequency portion of the signal to the CLEC's xDSL equipment in its collocation space. The splitter directs (1) the voiceband signals through a pair of copper wires to the voice switch, and (2) the digital data traffic though another pair of copper wires to the xDSL equipment in the CLEC's collocation space that is, in turn, attached to the CLEC's network. For remote terminal (RT) based line sharing, the CLEC's meet point is the collocation point of termination at the remote terminal. BellSouth will use jumpers to connect the CLEC's connector block to the splitter. The splitter will route the high frequency portion of the circuit to the CLEC's xDSL equipment in its collocation space within the remote terminal.

Q. WHAT DEVICES USED ON UNBUNDLED LOOPS CAN CAUSE INTERFERENCE WITH DSL SERVICES?

18 A. There are three arrangements on many loops that permit or enhance
19 voice service but effectively prevent or interfere with the satisfactory
20 transmission of digital signals. Because these arrangements potentially
21 cause interference with DSL services, they are sometimes referred to as
22 "disturbers," which must be removed from local loops as needed to allow
23 line sharing.

Q. WHAT ARE THESE THREE "DISTURBERS", AND HOW DO THEY

### INTERFERE WITH THE TRANSMISSION OF DIGITAL SIGNALS?

2

1

Α. 3 The three disturbers often referred to in the context of provisioning DSL 4 services are load coils, bridged tap, and repeaters. These devices were developed to permit or enhance service in the voice band frequency 5 6 range, typically 300 Hertz to 3,400 Hertz. However, their use often degrades successful transmission, particularly of digital signals, in the 7 frequency range above 20,000 Hertz, the range in which xDSL services 8 9 typically operate. Removing these devices typically restores the capability of a loop to accommodate services utilizing such high frequency ranges, a 10 process referred to as "conditioning." However, this conditioning may 11 render the loop incapable of providing satisfactory voice grade service. 12

13

14

Q. PLEASE DESCRIBE THE FUNCTION OF A LOAD COIL.

15

A. A load coil is an electrical inductance coil designed to improve
transmission of signals in the voice band, and is typically used to extend
the loop length over which acceptable voice grade transmission may be
achieved, normally loop lengths greater than 18,000 feet. The load coil
boosts or amplifies analog voice signals thus permitting their reception at
greater distances.

22

23

Q. HOW DOES A LOAD COIL INTERFERE WITH AN XDSL SIGNAL?

24

25

A. The load coil's electrical inductance changes the rate at which data is

transmitted through the loop such that the two xDSL modems at each end
of the loop do not effectively receive each others' transmissions.

3

4

Q. PLEASE DESCRIBE THE FUNCTION OF A REPEATER.

5

6 Α. As the name implies, a repeater inserted into a loop receives a signal from one end of a loop, amplifies the signal, and then retransmits the signal to 7 the other end of the loop. This achieves the same general purpose as the 8 9 load coil describe above, namely, to extend the viable range of a loop beyond normal limits of approximately 18,000 feet. There are two types of 10 repeaters in common use throughout BellSouth's nine-state region. Voice 11 frequency repeaters, the most common, are designed to amplify the 12 analog signal carried in the voice frequency band of the loop. Digital 13 14 repeaters extend the useful range of loops used for digital services.

15

16

Q. HOW DOES A REPEATER INTERFERE WITH AN XDSL SIGNAL?

17

A. Voice frequency repeaters can distort a digital signal to the point that high
bit-rate error rates make the signal unusable. Digital repeaters may or
may not interfere with xDSL type services, but success is very dependent
upon the type of digital service being provisioned

22

23

Q. PLEASE DESCRIBE THE FUNCTION OF A BRIDGED TAP.

24

25

A. A bridged tap is a metallic extension to a loop such that the same loop

1		appears at two separate service locations. Obviously, the loop can be
2		used at only one of the two service locations at a given time; however,
3		bridged tap is useful in increasing the efficiency of overall loop usage.
4		
5	Q.	HOW DOES A BRIDGED TAP INTERFERE WITH AN XDSL SIGNAL?
6		
7	A.	Bridged tap increases the inductance for the loop at both service
8		locations; thus the length of the bridged tap must be considered along with
9		the length of the loop to the service location.
10		
11	Q.	PLEASE SUMMARIZE YOUR TESTIMONY CONCERNING LINE
12		SHARING.
13		
14	A.	My testimony describes the means by which BellSouth provisions line
15		sharing, including the work that must be done to remove existing barriers
16		to line sharing in BellSouth's loops to permit a successful installation. The
17		Authority should approve the cost studies submitted by Ms. Caldwell with
18		her testimony that reflect the provisioning process I have described.
19		
20	Acce	ess to Sub-Loop Elements
21		
22	Q.	WHAT ARE SUB-LOOP ELEMENTS?
23		
24	A.	Sub-loop elements are the individual elements that make up the entire
25		loop that extends from the BellSouth central office to the demarcation

I		point between BeilSouth's network and the inside wire at the end user
2		customer's premises. BellSouth offers access to the following sub-loop
3		elements:
4		Unbundled Loop Feeder
5		Unbundled Loop Distribution
6		Unbundled Loop Concentration
7		<ul> <li>Unbundled Network Interface Device (NID)</li> </ul>
8		<ul> <li>Unbundled Intrabuilding Network Cable (UINC)</li> </ul>
9		<ul> <li>Unbundled Network Terminating Wire (UNTW)</li> </ul>
10		
11	Q.	PLEASE DISCUSS THE SUB-LOOP ELEMENT REFERRED TO AS
12		LOOP FEEDER.
13		
14	A.	In many cases BellSouth deploys a multiple circuit copper cable (for
15		example, a 1,200 pair cable) from its central office to a remote terminal or
16		cross-box located somewhere between the central office and the end
17		user's location. Each pair within this cable can be used to carry a single
18		voice conversation. This section of the loop is called the loop feeder.
19		Sometimes, loop feeder has been referred to as "the first mile" of the loop
20		in that it is the first section of cable leaving the BellSouth central office
21		headed towards a customer's premises. This loop feeder section may
22		also be provisioned using fiber optic cable.
23		
24		The copper pairs of the loop feeder are then individually cross-connected
25		to pairs in smaller cables called loop distribution. The loop distribution

cables then serve all the houses or businesses in a sub-section of one of the central office's serving areas.

3

4

5

1

2

Q. PLEASE DESCRIBE THE SUB-LOOP ELEMENT REFERRED TO AS LOOP CONCENTRATION.

6

A. Loop concentration is equipment such as digital loop carrier equipment
used to concentrate the individual loop distribution pairs (which I discuss
below) onto digital transmission facilities such as DS-1 circuits in the loop
feeder facilities. Unbundled loop concentration allows a CLEC to digitize
and multiplex its loop distribution pairs (either its own or those it acquired
from BellSouth on an unbundled basis) onto digital facilities for
transmission to the BellSouth central office.

14

15

16

Q. PLEASE DESCRIBE THE SUB-LOOP ELEMENT REFERRED TO AS LOOP DISTRIBUTION.

17

Α. Loop distribution facilities have been referred to as the "last mile" because 18 these are the facilities that go the "last mile" to the customer's premises. 19 The loop distribution cables are used to, in effect, "fan out" the availability 20 of the cable pairs and/or transmission channels, if DLC equipment is used, 21 from the loop feeder cables. In this regard, the cables one would see 22 within a sub-division are generally loop distribution cables. Between the 23 24 loop feeder cable and the loop distribution cable is a cabinet, above ground "hut", or below ground "controlled environment vault" within which 25

cross-connections and/or electronics are located. These structures have been variously described as the "Feeder/Distribution Interface", the "Serving Area Interface", the "Remote Terminal" or, in its most simplistic configuration a "cross-connect box" or simply "cross-box". Any of these terms can be used to refer to the function of connecting a copper cable pair or fiber optic facility in the loop feeder facilities to a copper cable pair in the loop distribution facilities. In the case of multi-story commercial buildings, the loop distribution facility eventually runs to the customer's building and is then connected to Intrabuilding Network Cable (INC) and/or Network Terminating Wire (NTW). In single family dwellings, a "drop wire" connects the entire loop to the device called the Network Interface Device (NID).

Q. PLEASE DESCRIBE THE SUB-LOOP ELEMENT REFERRED TO AS INTRABUILDING NETWORK CABLE (INC).

Α.

In multi-story buildings, and in some campus-type properties, INC is that part of BellSouth's loop facilities extending from a cross-connect terminal at, or close to, the entrance point of the distribution cable. INC is another sub-loop element that is located on the network side of the demarcation point between BellSouth's network and the inside wire at an end user customer's premises. INC in some cases is referred to as "riser cable." Although INC may in some cases connect directly to the NID, typically it connects to NTW in a wiring closet prior to final termination at the end user's NID.

loop to its final termination at the customer's NID. The NID establishes

the demarcation point between BellSouth's network and the inside wire at

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the end user customer's premises. NTW, INC, loop distribution, loop concentration, and loop feeder are located on BellSouth's side of the demarcation point and, thus, comprise sub-loop elements of BellSouth's network.

Q. WHAT IS YOUR UNDERSTANDING OF THE FCC'S STATEMENT IN ITS
 THIRD REPORT AND ORDER AND FOURTH FUTHER NOTICE OF
 PROPOSED RULEMAKING, FCC 99-238, RELEASED NOVEMBER 5,
 1999 (UNE REMAND ORDER) THAT BELLSOUTH IS REQUIRED TO
 PROVIDE CLECS ACCESS TO ILEC-OWNED INSIDE WIRING, AND
 WHAT IS ITS IMPACT, IF ANY?

A. First, let me set out what the FCC stated. The FCC's UNE Remand Order at ¶210 states:

We clarify that "technically feasible points" would include a point near the customer premises, such as the point of interconnection between the drop and the distribution cable, the NID, or the MPOE. Such access would give competitors unbundled access to the inside wire sub-loop element, in cases where the incumbent owns and controls wire inside the customer premises. It would also include any FDI, whether the FDI is located at a cabinet, CEV, remote terminal, utility room in a multi-dwelling unit, or any other accessible terminal. (Emphasis added).

The FCC's Remand Order at Paragraph 169 describes more specifically "control" of inside wire as follows:

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Section 68.3 of our rules defines the demarcation point as that point on the loop where the telephone company's control of the wire ceases, and the subscriber's control (or, in the case of some multiunit premises, the landlord's control) of the wire begins. Thus, the demarcation point is defined by control; it is not a fixed location on the network, but rather a point where an incumbent's and a property owner's responsibilities meet. The demarcation point is often, but not always, located at the minimum point of entry (MPOE), which is the closest practicable point to where the wire crosses a property line or enters a building. In multiunit premises, there may be either a single demarcation point for the entire building or separate demarcation points for each tenant, located at any of several locations, depending on the date the inside wire was installed, the local carrier's reasonable and nondiscriminatory practices, and the property owner's preferences. Thus, depending on the circumstances, the demarcation point may be located either at the NID, outside the NID, or inside the NID.

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The above paragraphs from the UNE Remand Order demonstrate that the FCC intended to include in the unbundling of what it refers to as "inside wire" those facilities that exist today on the network side of the demarcation point, and which are included in BellSouth's Accounts and

Subsidiary Records Categories as Network Terminating Wire (NTW), and that which are defined in Part 32 of the Uniform System Of Accounting (USOA) as Intrabuilding Network Cable (INC). As defined in several previous FCC Orders, however, "inside wire" is located on the customer's side of the demarcation point and is under control of the end user or, in some cases, the property owner or the landlord. A CLEC should obtain access to the sub-loop elements NTW and INC from BellSouth in the same manner as it obtains access to any other unbundled network element. As to access to the inside wire on the customer's side of the demarcation point, such access should be obtained from the end user or from the building owner. BellSouth is not opposed to providing unbundled access to its sub-loop elements, however BellSouth has sought clarification from the FCC that its use of the term "inside wire" in this docket is not the same as that phrase has traditionally been used in describing facilities on the customer's side of the demarcation point.

Q. PLEASE EXPLAIN HOW BELLSOUTH PROVIDES CLECS WITH UNBUNDLED ACCESS TO SUB-LOOP ELEMENTS.

A. BellSouth offers access to all elements of its loop network through subloop unbundling offerings that comply with the FCC's UNE Remand Order
and FCC Rule 319(a). In keeping with the full intent of the FCC's UNE
Remand Order, BellSouth is, and has been, providing sub-loop unbundling
at technically feasible points of access.

In order to provide CLECs with access to unbundled sub-loop elements, BellSouth will construct a separate access terminal in proximity to BellSouth's terminal. The CLEC installs its own terminal in proximity to the access terminal. BellSouth then extends tie cables between its terminal and the access terminal. These tie cables are connected to the unbundled sub-loop elements the CLEC desires to acquire from BellSouth. The CLEC extends a tie cable from its terminal to the access terminal and thus the unbundled sub-loop elements. BellSouth believes that such access affords CLECs a meaningful opportunity to compete, while also maintaining network security and reliability.

Q. HAVE YOU PREPARED AN EXHIBIT TO ILLUSTRATE BELLSOUTH'S PROPOSAL REGARDING CLEC ACCESS TO UNBUNDLED SUB-LOOP ELEMENTS?

A. Yes. Exhibit WKM-1, which is attached to this testimony, contains three

(3) pages that I hope will aid in understanding this issue. Page 1 shows
the typical access to unbundled NTW in a "garden" apartment. The point
to be made here is that the access terminal is cross-connected by tie
cable pairs with the terminals of both BellSouth and the CLEC thus
allowing a CLEC access while preserving network reliability and security.
The access terminal in this scenario could also function as a single point
of interconnection (SPOI) for access to unbundled NTW (UNTW). Page 2

As used by the FCC in its UNE Remand Order, the term "SPOI" refers to a single point of interconnection at multi-unit premises that is suitable for use by multiple telecommunications carriers.

shows BellSouth's proposed form of access for a CLEC to the sub-loop element UINC. BellSouth proposes the use of an access terminal or connector block on the cross-connect panel that is cross-connected by tie cable with the terminals of both BellSouth and the CLEC. The cross-connect panel, which serves as the access terminal for UINC, could also serve as a SPOI for use by multiple carriers. Page 3 shows access to the sub-loop element Unbundled Loop Distribution.

## Q. WILL BELLSOUTH PROVIDE A CLEC WITH DIRECT ACCESS TO BELLSOUTH'S SUB-LOOP ELEMENTS?

Α. No. Such direct access would reduce network security and reliability, which the FCC found to be indicators that a given arrangement is not technically feasible. (First Report and Order in Docket 96-325, ¶ 203) The FCC requires that "each carrier must be able to retain responsibility for the management, control, and performance of its own network." (First Report and Order in Docket 96-325, ¶ 203) Direct access, if allowed, would render BellSouth incapable of managing and controlling its network in the provision of service to its and certain CLECs' end user customers. Therefore, due to concerns about network reliability and security, BellSouth believes that direct access to its network facilities by CLECs is not in the best interests of end user customers, whether they are end user customers of BellSouth or of the CLECs. 

While I am in no way disparaging CLECs' technicians, with direct access it

is possible for the CLECs' technicians to intentionally or unintentionally disrupt BellSouth's end user's service as well as the service of CLECs using unbundled loops or unbundled sub-loop elements acquired from BellSouth. That simply presents an unnecessary risk.

Further, with direct access, BellSouth would be at the CLECs' mercy to tell BellSouth how, where, and when the CLEC has used BellSouth's facilities. This would unnecessarily complicate the maintenance of inventory records. Indeed, how could BellSouth ever have an accurate record of its facilities if every CLEC in the state had direct access to these facilities? Of course, the lack of accurate inventory information would result in provisioning and repair of customer service becoming more error prone. I do want to be perfectly clear about this. What we are talking about here, is allowing technicians from any and every CLEC in Tennessee to walk into an equipment room in a high rise building and start appropriating pairs and facilities for its own use, without consulting with anyone and without any obligation to keep appropriate records so that the next person in the room knows what belongs to whom. It doesn't take much imagination to know what a disaster this would end up being for BellSouth and for the customers in the building in question.

Q. HAVE ANY STATE UTILITY COMMISSIONS ADDRESSED THE ISSUE OF CLEC ACCESS TO BELLSOUTH'S SUB-LOOP ELEMENTS?

A. Yes. The Florida Public Service Commission (FPSC) considered the

issue of access to the sub-loop element UNTW in the arbitration proceedings between BellSouth and MediaOne in Docket No. 990149-TP. Also, the Georgia Public Service Commission (GPSC) considered this same issue of access to UNTW in the arbitration proceedings between BellSouth and MediaOne in Docket No. 10418-U.

The FPSC denied direct access to UNTW and required an access terminal to be placed between BellSouth's network and MediaOne's network. The access terminal gives CLECs the access to UNTW they desire without reducing network reliability and security. The FPSC determined that MediaOne and others could gain access to UNTW without reducing network security and reliability by adopting BellSouth's proposed form of access. A portion of that Order follows:

The record does not contain evidence of any case which would support a proposal where one party is seeking to use its own personnel to, in effect, modify the configuration of another party's network without the owning party being present. We find that MediaOne's proposal to physically separate BellSouth's NTW cross-connect facility from BellSouth's outside distribution cross-connect facilities is an unrealistic approach for meeting its objectives. Therefore, BellSouth is perfectly within its rights to not allow MediaOne technicians to modify BellSouth's network.

...Based on the evidence presented at the hearing, we believe that

it is in the best interests of the parties that the physical interconnection of MediaOne's network be achieved as proposed by BellSouth.

We find from the record that at least one other CLEC in Florida and an unknown number of CLECs in other states have been able to provide service based on BellSouth's NTW proposal. Thus, we believe that MediaOne should be able to provide service using BellSouth's NTW proposal... (FPSC in MediaOne Docket No. 990149-TP.)

The Georgia Commission likewise found that MediaOne should gain access through the use of an access terminal and BellSouth's facilities. In its Order, the Commission stated:

As stated in the prior section, to the extent there is not currently a single point of interconnection that can be feasibly accessed by MediaOne, consistent with the FCC's Third Report and Order, BellSouth must construct a single point of interconnection that will be fully accessible and suitable for use by multiple carriers. Such single points of interconnection shall be constructed consistent with MediaOne's proposal such that MediaOne shall provide its own cross connect (CSX) facility in the wiring closet to connect from the building back to its network. MediaOne would then be able to connect its customers within the MDU [that is, the Multiple Dwelling

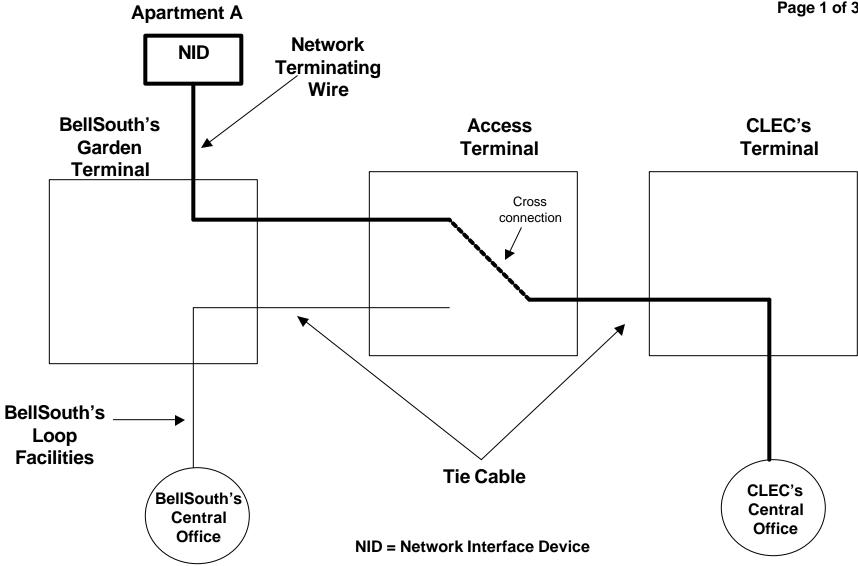
1		Unit] by means of an 'access CSX'. (GPSC in MediaOne Docket
2		No. 10418-U.)
3		
4	Q.	WHAT DOES BELLSOUTH WANT THE AUTHORITY TO DO WITH
5		REGARD TO THE ISSUE OF ACCESS TO THE SUB-LOOP ELEMENTS
6		YOU HAVE DESCRIBED?
7		
8	A.	BellSouth believes the use of access terminals gives CLECs access to
9		unbundled sub-loop elements while still maintaining network reliability and
10		security. Such access should apply to all sub-loop elements. Accordingly
11		the Authority should approve the cost studies and resulting rates
12		submitted with the testimonies of Ms. Caldwell and Mr. Ruscilli.
13		
14	Cust	omized Routing
15		
16	Q.	WHAT IS CUSTOMIZED ROUTING?
17		
18	A.	Customized routing (which has also been referred to as selective routing)
19		allows calls from CLEC customers served by a BellSouth switch to reach
20		the CLEC's choice of operator service or directory assistance service
21		platforms instead of BellSouth's operator service and directory assistance
22		service platforms. Customized routing can be provided when a CLEC
23		acquires unbundled local switching from BellSouth or resells BellSouth's
24		local exchange services.

1	Q.	BRIEFLY DESCRIBE THE METHODS AVAILABLE FOR CUSTOMIZED
2		ROUTING.
3		
4	A.	The first method of providing customized routing that BellSouth has made
5		available is the Line Class Code (LCC) method. Availability of customized
6		routing capability using LCCs is offered on a first-come, first-served basis.
7		To date, BellSouth has not denied any request for selective routing based
8		on lack of LCC capacity.
9		
10	Q.	WHAT IS THE SECOND METHOD BY WHICH BELLSOUTH PROVIDES
11		CUSTOMIZED ROUTING?
12		
13	A.	The second method for providing customized routing is through the use of
14		BellSouth's Advanced Intelligent Network (AIN) platform. A technical trial
15		of customized routing using BellSouth's AIN platform commenced in
16		Louisiana, in August 1998, and was successfully completed in September
17		1998. A second trial commenced from May 1999 and successfully
18		completed in August 1999.
19		
20		BellSouth has completed work on enhancements to its AIN Service
21		Management System (SMS) which will facilitate CLECs' ability to create
22		and update routing information for the CLECs' end users. BellSouth
23		recently completed end-to-end testing (ETET) of this enhancement.
24		
25		By providing CLECs a choice of customized routing methods, BellSouth

1		better enables CLECs to compete based upon their own business plans
2		and priorities.
3		
4	Q.	PLEASE SUMMARIZE YOUR TESTIMONY WITH REGARD TO
5		CUSTOMIZED ROUTING.
6		
7	A.	BellSouth offers two methods by which CLECs may obtain customized
8		routing. Accordingly, the Authority should approve the cost studies and
9		resulting rates for the AIN method as submitted in the testimonies of Ms.
10		Caldwell and Mr. Ruscilli. The Authority has previously approved the rates
11		for the Line Class Code method.
12		
13	Q.	DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?
14		
15	A.	Yes.

## Typical access to unbundled network terminating wire in "garden" apartment

BellSouth Telecommunications, Inc.
Tennessee Regulatory Authority
Docket Number 00-00544
Exhibit WKM-1
Page 1 of 3



## BellSouth's proposed form of access BellSouth Telecommunications, Inc. **Tennessee Regulatory Authority** Inside Wire Docket Number 00-00544 Telephone Set Network Interface Device (NID) **Exhibit WKM-1** Page 2 of 3 Network Terminating Wire (NTW) **Fourth** Floor Wiring closet (May include access terminal for Unbundled NTW Access) Third Intrabuilding Network Cable Floor ("Riser Cable") Second Floor **Cross-Connect** Panel BellSouth's terminal for First **INC** access Floor **BellSouth** Loop **BellSouth Facilities Basement** Central Office CLEC's CLEC's terminal **Loop Facilities** Tie cable

BellSouth Telecommunications, Inc. **Access to the Sub-loop Element Loop Distribution Tennessee Regulatory Authority** Docket Number 00-00544 **Exhibit WKM-1** Page 3 of 3 **BellSouth End Loop Distribution** User(s) Connector **CLEC Terminal** block **BellSouth** To CLEC **Feeder Distribution** central office Interface or ("Cross-box") equipment Loop Feeder To BellSouth central office

1		BELLSOUTH TELECOMMUNICATIONS, INC.
2		TESTIMONY OF RONALD M. PATE
3		BEFORE THE TENNESSEE REGULATORY AUTHORITY
4		DOCKET NO. 00-00544
5		November 13, 2000
6		
7	Q.	PLEASE STATE YOUR NAME, YOUR POSITION WITH BELLSOUTH
8		TELECOMMUNICATIONS, INC. AND YOUR BUSINESS ADDRESS.
9		
10	A.	My name is Ronald M. Pate. I am employed by BellSouth
11		Telecommunications, Inc. ("BellSouth") as a Director, Interconnection
12		Services. In this position, I handle certain issues related to local
13		interconnection matters, primarily operations support systems ("OSS").
14		My business address is 675 West Peachtree Street, Atlanta, Georgia
15		30375.
16		
17	Q.	PLEASE SUMMARIZE YOUR BACKGROUND AND EXPERIENCE.
18		
19	A.	I graduated from Georgia Institute of Technology in Atlanta, Georgia, in
20		1973, with a Bachelor of Science Degree. In 1984, I received a Masters of
21		Business Administration from Georgia State University. My professional
22		career spans over twenty-five years of general management experience in
23		operations, logistics management, human resources, sales and marketing.

1		I joined BellSouth in 1987, and have held various positions of increasing
2		responsibility.
3		
4	Q.	HAVE YOU TESTIFIED PREVIOUSLY?
5		
6	A.	I have testified before the Public Service Commissions in Alabama,
7		Florida, Georgia, Louisiana, South Carolina, the Tennessee Regulatory
8		Authority and the North Carolina Utilities Commission.
9		
10	Q.	WHAT IS THE PURPOSE OF YOUR TESTIMONY?
11		
12	Α	The purpose of my testimony is to address the FCC'S Third Report And
13		Order And Fourth Further Notice Of Proposed Rulemaking In CC Docket
14		96-98 (FCC 99-238); Released November 5, 1999, (UNE Remand Order)
15		as its relates to BellSouth's OSS including a new requirement that
16		BellSouth must provide Competitive Local Exchange Carriers (CLECs)
17		access to loop make-up data via BellSouth's OSS. Additionally, I will
18		address BellSouth's OSS solution to satisfy the FCC's Third Report and
19		Order in CC Docket No. 98-147 and Fourth Report and Order in CC
20		Docket No. 96-98, released December 9, 1999 (Line Sharing Order)
21		requiring that incumbent LECs unbundle the high frequency portion of the
22		loop to permit the CLECs to provide xDSL-based service by sharing the
23		lines with the incumbent's voiceband service.

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•		

2 Q. DOES BELLSOUTH PROVIDE CLECS NONDISCRIMINATORY

3 ACCESS TO ITS OSS?

Yes. BellSouth provides CLECs nondiscriminatory access to its OSS
 functions for pre-ordering, ordering, provisioning, maintenance and repair,
 and billing through robust and reliable manual and electronic interfaces.
 BellSouth's OSS interfaces for CLECs are operated and available on a
 nine-state regional basis in BellSouth's serving areas, including those in
 Tennessee. These interfaces allow CLECs the same pre-ordering and

Α.

Q. DID THE FCC CHANGE ITS DEFINITION OF OSS IN THE UNE REMAND ORDER?

ordering functions that BellSouth provides to itself.

No. Specifically, the FCC defined OSS as consisting of pre-ordering, ordering, provisioning, maintenance and repair, and billing functions supported by an incumbent LEC's database and information. Further, it stated "We find no reason to modify our definition of OSS." The FCC clarified that the pre-ordering function includes access to loop qualification information. Loop qualification information identifies the physical attributes of the loop plant (such as loop length, the presence of analog load coils and bridge taps, and the presence and type of Digital Loop Carrier) that

<sup>&</sup>lt;sup>1</sup> FCC 99-238 paragraph 425

1		enable carriers to determine whether the loop is capable of supporting
2		xDSL and other advanced technologies. <sup>2</sup> In summary, the FCC did not
3		redefine OSS, rather it clarified the pre-ordering function to include access
4 5		to loop qualification information.
6	Q.	DID THE FCC'S UNE REMAND ORDER IMPACT BELLSOUTH'S OSS
7		AS THESE OSS ARE USED BY CLECS?
8		
9	A.	The UNE Remand Order did not impact the existing CLEC OSS access
10		offered by BellSouth other than to specify at paragraph 426 that "the pre-
11		ordering function includes access to loop qualification [make-up]
12		information."
13		
14	Q.	WHAT IS BELLSOUTH'S RESPONSE TO THE FCC'S REQUIREMENT
15		THAT LOOP MAKE-UP INFORMATION BE AVAILABLE TO CLECS AS
16		PART OF THE PRE-ORDERING FUNCTION?
17		
18	A.	BellSouth has developed and implemented procedures to provide CLECs
19		with detailed loop make-up information via the manual Service Inquiry (SI)
20		process. Additionally, BellSouth has under development a detailed

21

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mechanized Loop Make-up pre-order process that is accessible through

all current electronic interfaces that support pre-order functions (LENS,

<sup>&</sup>lt;sup>2</sup> FCC 99-238 paragraph 426

TAG, and RoboTAG®). This process will be available to any CLEC that is interested in incorporating these procedures into its interconnection agreement. BellSouth witnesses Ms. Caldwell and Mr. Ruscilli address the costs and BellSouth's proposed rates associated with the work required to incorporate this process into the pre-ordering function.

## Q. PLEASE DESCRIBE THE MANUAL LOOP MAKE-UP SI PROCESS.

Α.

The loop make-up data is defined as the physical characteristics of the loop facilities beginning at the BellSouth central office. The data is listed in sequential order, and ends at the serving distribution terminal. Loop make-up data consists of such information as cable gauge and length, bridged taps, load coils, presence of Digital Loop Carrier ("DLC"), and other equipment that is part of local loop facilities.

The CLEC completes the "Customer Information" section of the Loop
Make-up SI form indicating if it wants the loop make-up by telephone
number, circuit identifier or address. The CLEC submits the Loop Makeup SI form to the Complex Resale Services Group ("CRSG") or their
Account Team. The CRSG/Account Team forwards the SI form to
BellSouth's Outside Plant Engineering Service Advocacy Center ("SAC").
The SAC verifies the availability of loop facilities. If the Loop Make-up SI
indicates the CLEC wants the make-up by telephone number or circuit

identifier, the SAC will return a specific make-up for the requested telephone number or circuit identifier. If the Loop Make-up SI indicates the CLEC wants the make-up by address, the SAC will return a specific make-up for the requested address.

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The SAC will supply make-up for either a suitable copper pair(s) and DLC pairs as requested by the CLEC for the requested address, telephone number or circuit identifier. If either a copper pair, or DLC, but not both exists at that address/telephone number/circuit identifier, the SAC will indicate in the "Comments Section" which is not available at the requested address/telephone number/circuit identifier. The following is an example comment for an existing DLC make-up where a copper pair does not exist: "Provided DLC make-up at above address, no copper pairs exist at this location". Again, the loop make-up will be listed in sequential order starting at the central office and ending at the end user terminal. The SAC will return the completed Loop Make-up SI to the CRSG/Account Team. The CRSG/Account Team reviews the SI form for completeness and forwards the loop make-up data to the CLEC via electronic mail. They also forward the information to the Local Carrier Service Center ("LCSC") for bill preparation. The LCSC provides a Firm Order Confirmation ("FOC") to the CLEC and generates a service order that automatically completes for billing the service.

23

1	Q.	IS THE MANUAL LOOP MAKE-UP SERVICE INQUIRY MERELY AN
2		INTERIM PROCESS UNTIL ELECTRONIC ACCESS IS AVAILABLE?
3		
4	A.	No. The manual Loop Make-up ("LMU") SI process will continue to be a
5		means for obtaining loop make-up information, even after the electronic
6		Loop Make-up SI process is available. CLECs may obtain documentation
7		for the current Unbundled Network Element ("UNE") pre-ordering and
8		ordering information pertaining to BellSouth's manual loop make-up at
9		BellSouth's Website:
10		http://www.interconnection.bellsouth.com/guides/bpobr.html.
11		
12	Q.	CAN YOU ESTIMATE THE QUANTITY OF BELLSOUTH LOOPS THAT
13		HAVE DETAILED LOOP INFORMATION POPULATED WITHIN LFACS
14		THEREBY REDUCING THE NEED FOR A MANUAL SI?
15		
16	A.	While 100% of BellSouth's loops are populated in LFACS with certain
17		basic information, not all will have the detailed loop make-up information.
18		However, in the high-populated metropolitan areas where the marketing
19		efforts of CLECs are most likely to be concentrated, it is approximated that
20		as much as 80% of loops with detailed loop make-up information are
21		populated in LFACS. So it is only for that remaining small percentage of
22		loops that the manual SI process may have to be utilized. And whenever
23		CLECs must use the manual SI process for these remaining loops,

BellSouth will load the resulting loop make-up information in LFACS for future queries.

Q.

Α.

PLEASE DISCUSS THE MEANS BELLSOUTH HAS DEVELOPED TO
PROVIDE CLECS WITH ELECTRONIC ACCESS TO LOOP MAKE-UP
INFORMATION AND ELECTRONIC ORDERING OF xDSL LOOPS?

BellSouth is developing a comprehensive electronic process for preordering and ordering for CLECs via the Telecommunications Access Gateway ("TAG"), RoboTAG<sup>TM</sup> and Local Exchange Navigation System ("LENS"). It provides electronic access to loop make-up information from the Loop Facilities Assignment and Control System ("LFACS") and electronic ordering of xDSL loops.

BellSouth will also be enhancing the Electronic Data Interchange ("EDI") to provide electronic ordering of xDSL loops. These enhancements are currently in beta testing with selected CLECs. Interested CLECs will need to conduct System Readiness Testing ("SRT") with BellSouth prior to using these new functions when available for production. If they have not done so already, CLECs must also upgrade their TAG interface to the TCIF 9.0 version in order to test the new functions and then be able to use them in production. CLECs may obtain information on the manual and electronic ordering of BellSouth Loop Make-up at the BellSouth Website:

1		http://interconnection.bellsouth.com/products/UNE/bstlmu.pdf.
2		
3	Q.	PLEASE DESCRIBE BELLSOUTH'S LOOP QUALIFICATION SYSTEM
4		("LQS") AND ITS PURPOSE IN SUPPORTING BELLSOUTH'S DSL
5		PRODUCT.
6		
7	A.	LQS stands for Loop Qualification System. LQS was designed as a tool
8		for Network Service Providers, the purchasers of BellSouth's tariffed
9		industrial class ADSL offering to determine whether a particular service
10		location is qualified for BellSouth's industrial class ADSL offering based on
11		BellSouth's defined technical parameters. In other words, by entering a
12		telephone number or circuit identifier, LQS provides the user with a
13		qualified "yes/no" response based on the technical parameters of
14		BellSouth's industrial class ADSL offering only. LQS does not provide
15		loop make-up information as contemplated by the FCC's UNE Remand
16		Order.
17		
18	Q.	DOES BELLSOUTH PROVIDE CLECs ACCESS TO LQS?
19		
20	A.	Yes. Subsequent to the FCC's UNE Remand Order, LQS was made
21		available for use by CLECs on an interim basis until the mechanized loop
22		make-up interface is deployed. However, the purpose of LQS did not
23		change with making this access to CLECs available - it remains a tool to

1		provide a response to the inquirer if the location is qualified for BellSouth's
2		ADSL service. Lastly, LQS does not provide the level of detailed
3		information in order that a CLEC may make an independent judgment
4		about whether the loop is capable of supporting advanced services
5		equipment the CLEC intends to install.
6		
7	Q.	HOW DOES A CLEC OBTAIN ACCESS TO LQS?
8		
9	A.	A CLEC may contact its BellSouth account team to obtain information on
10		gaining access to LQS. The account team will assist with the appropriate
11		documentation necessary to obtain a password and resulting access to
12		LQS. CLECs may obtain a Loop Qualification System ("LQS")
13		DLEC/CLEC Job Aid via the BellSouth Website:
14		http://www.interconnection.bellsouth.com/guides/bpobr.html
15		
16	Q.	DOES BELLSOUTH'S BUSINESS-CLASS ADSL UTILIZE LQS?
17		
18	A.	Yes. BellSouth's business class ADSL, sold from the FCC Tariff No.1 and
19		intended primarily for business applications, utilizes LQS as a "screening
20		function" to determine if a manual SI and subsequent manual loop make-
21		up is required. In those instances that LQS provides a response that the
22		loop under review will meet the required data speed, BellSouth will begin

its order, design and provisioning phase, without involving the SI process.

1		In the remaining instances, where the response indicates that the loop
2		under review will not perform at the required data speeds, BellSouth
3		utilizes the manual SI and subsequent loop make-up to obtain exact loop
4		make-up information.
5		
6	Q.	YOU HAVE REFERRED TO BOTH BELLSOUTH BUSINESS CLASS
7		ADSL AND INDUSTRIAL CLASS ADSL. PLEASE DIFFERENTIATE.
8		
9	A.	My reference to BellSouth's business class ADSL is describing a high-
10		speed service with data rates of:
11		• 384 Kbps x 384 Kbps
12		• 768 Kbps x 512 Kbps
13		• 1.5 – 1.8 Mbps x 512 - 768 Kbps
14		• 2 – 4 Mbps x 640 – 896 Kbps
15		● 4 – 6 Mbps x 640 – 896 Kbps
16		• 192 Kbps x 192 Kbps.
17		
18		The business class offering will provide guaranteed performance levels to
19		provide a desired class of service including symmetric and asymmetric
20		data rates. The BellSouth business class ADSL is comparable to UCLs
21		CLECs will be ordering.
22		

1		My reference to BellSouth's industrial class ADSL is describing a
2		comparatively lower speed service, downstream data rate up to 1.5 Mbps
3		and upstream data rate up to 256 Kbps. The cost structure for this
4		offering does not support special actions by BellSouth to either condition
5		an existing loop or to provide a new loop in order to make ADSL work at a
6		given location. The 1.5 Mbps x 256 Kbps offering, referred to as industrial
7		service, is a "best effort", low cost, mass market offering.
8		
9	Q.	WHAT IS THE SOURCE OF THE LOOP INFORMATION CONTAINED
10		WITHIN LQS?
11		
12	A.	The database of record for loop make-up information is LFACS. Thus, the
13		source of loop information in LQS is LFACS. However, LQS also utilizes
14		the additional software systems described below:
15		
16		Loop Engineering Information System ("LEIS") - An umbrella system
17		with several modules, one of which is LEAD.
18		
19		Loop Engineering Assignment Data ("LEAD") - LEAD is a snapshot of
20		the LFACS database. It receives current data once a month for all wire
21		centers.
22		

1	•	Hands-Off Assignment Logic - ("HAL") HAL is a BellSouth developed
2		software system designed to pull information from LFACS and join
3		transactions that can not be performed by LFACS, including
4		assignment of most service orders, among which includes some
5		assignments on ADSL facilities.

Q. IS DIRECT ACCESS TO LFACS OR LEIS/LEAD REQUIRED IN ORDER
TO PROVIDE CLECS WITH DETAILED INFORMATION ABOUT THE
LOOP?

11 A. No. BellSouth's obligation is to provide requesting carriers the same

12 underlying information that BellSouth has in any of its own databases or

13 other internal records<sup>1</sup>. BellSouth's mechanized OSS interface and

14 manual interface provides a means to submit either a mechanized LMU

15 pre-order query or a manual LMU Service Inquiry ("SI") to LFACS and

16 receive a response. In the case of LEIS/LEAD, access may be obtained

17 by CLECs for LQS, which provides a "yes/no" qualified response.

Q. COULD I NOW ASK YOU TO ADDRESS LINE SHARING? HOW HAS THE FCC DEFINED LINE SHARING?

<sup>&</sup>lt;sup>1</sup> CC Docket 96-68, Paragraph 427, Page 193, released November 5, 1999

Α. In its Third Report and Order in CC Docket No. 98-147 and Fourth Report and Order in CC Docket No. 96-98, released December 9, 1999, page 10, paragraph 13, the FCC adopted the requirement that incumbent LECs "unbundle the high frequency portion of the loop to permit competitive LECs to provide xDSL-based services by sharing lines with the incumbent's voiceband services." Additionally, on page 12, paragraph 17 of the same order, the FCC described Line Sharing generally as "the ability of two different service providers to offer two services over the same line, with each provider employing different frequencies to transport voice or data over that line."

Q. PLEASE DESCRIBE BELLSOUTH'S APPROACH TO DEVELOPING
OSS FUNCTIONALITY THAT WILL ELECTRONICALLY PROCESS
CLEC XDSL AND LINE SHARING SERVICE REQUESTS.

Α.

BellSouth is implementing a vendor solution provided by Telcordia

Technologies, Inc. to provide the OSS necessary for the pre-ordering,
ordering and provisioning of CLEC xDSL compatible loops and Line

Sharing. This extensive technical solution provides Pre-Existing Licensed
Software and Marketable Licensed Software and Services to integrate

Licensed Software for UNE Remand CLEC xDSL and Line Sharing into
BellSouth's operations environment. As an example, the solution includes
the establishment of a new corporate gateway along with a new system

1 architecture for the processing of Local Service Requests ("LSRs") for the 2 UNE Remand and Line Sharing Orders. 3 4 The Corporate gateway establishes a single entry point for processing of 5 xDSL requests. It provides a flexible and expandable independent 6 gateway that has security, logging and mapping capabilities, 7 The Corporate gateway is configured to provide Common Object Request Broker Architecture ("CORBA") interfaces for the TAG client APIs from 8 9 the CLECs and an interface for BellSouth's OSS. 10 This allows pre-ordering and ordering functionality utilizing BellSouth's 11 LENS, TAG, and Robo®Tag electronic interfaces. It also provides a 12 navigator interface for the Local Service Requests Router ("LSRR"), which 13 permits firm ordering functionality utilizing the BellSouth EDI electronic 14 interface. 15 16 The new system architecture known as Delivery Order Manager will 17 automate many of the service requests functions. Delivery Order 18 Manager can be described as a work flow sequencing and control 19 "engine" that works with partner applications to accept and process 20 service requests. Delivery Order Manager will manage the access to all 21 the databases needed to process a request. Some commonly known 22 databases for pre-order and order functionality are CRIS, CABS, RSAG, 23 ATLAS, and P/SIMS. In addition, Delivery Order Manager will access

1		LFACS for queries for loop make-up information. Delivery Order Manager
2		also interfaces with a new Service Order Generator for mechanized
3		service order creation allowing flow through of the requests to BellSouth's
4		Service Order Communications System ("SOCS"). In addition to the
5		software requirements and associated software Right-To-Use ("RTU")
6		fees, the Telcordia provided solution also provides support services.
7		Support services include such items as:
8		<ul> <li>Platform planning and support</li> </ul>
9		<ul> <li>Installation and system administration support</li> </ul>
10		Services integration testing
11		Training and documentation
12		
13	Q.	IS THE SCOPE OF WORK THAT IS TO BE PROVIDED BY TELCORDIA
14		EXCLUSIVELY FOR CLEC OSS CAPABILITIES ASSOCIATED WITH
15		THE UNE AND LINE SHARING ORDERS?
16		
17	A.	No. The majority of the work done in this effort is for OSS capabilities
18		associated with UNE Remand and Line Sharing orders, however,
19		Telcordia is performing additional work on Electronic Access Ordering
20		("EAO") functionality. EAO will provide ASR pre-order functionality for
21		address validations and Connecting Facility Assignment ("CFA") inquiries.
22		Approximately \$3.2 million is committed for licensed software Right-to-Use
23		fees for EAO.

1		
2	Q.	WHAT IS THE CURRENT VALUE OF THE SOFTWARE AND SERVICES
3		SCOPE OF WORK THAT WILL BE PERFORMED BY TELCORDIA FOR
4		BELLSOUTH IN THE UNE REMAND FOR XDSL AND LINE SHARING
5		EFFORT?
6		
7	A.	The software and service fees total approximately \$69,500,000 for the
8		UNE Remand for xDSL and Line Sharing software and services provided
9		by Telcordia Technologies, Inc. This includes approximately \$28,500,000
10		for UNE Remand for CLEC xDSL (including 3 change notices) and
11		approximately \$41,000,000 for Line Sharing. This does not include the
12		approximate \$3,200,000 for software fees described previously for EAO
13		functionality.
14		
15	Q.	PLEASE SUMMARIZE THE BENEFITS OF THE TELCORDIA SOLUTION
16		FOR XDSL AND LINE SHARING TO BELLSOUTH AND ITS CLEC
17		CUSTOMERS.
18		
19	A.	The Telcordia solution offers xDSL pre-ordering functionality utilizing
20		BellSouth's LENS, TAG, and Robo®Tag electronic interfaces. It provides
21		firm order functionality utilizing BellSouth's LENS, TAG, RoboTAG®, and
22		EDI electronic interfaces. A navigator interface for the Local Service
23		Requests Router ("LSRR") permits ordering functionality utilizing the

BellSouth EDI electronic interface. The mechanized LMU may be requested using multiple types of queries (i.e. by working telephone number, by working circuit identifier, query by spare facility at an address, query and reserve spare facility, and cancellation of a reservation). The Telcordia solution offers electronic processing of Line Sharing service requests allowing flow-through within BellSouth's OSS. Important benefits also include the ability to inventory and assign BellSouth facilities and splitters at the pre-specified CLEC meet points. These capabilities provided by the Telcordia solution translate into reliable, fast and accurate processing of CLEC xDSL and Line Sharing service requests. It provides state-of-the-art technology with the ability to process the anticipated volumes of requests in a cost-effective manner and to build future applications and functionalities.

Q. BASED ON CURRENT PLANS, WHEN WILL ELECTRONIC PREORDER AND ORDERING CAPABILITIES BE AVAILABLE UNDER THE
TELCORDIA SOLUTION?

Α

BellSouth currently has the pre-ordering functionality which includes loop make-up and the xDSL compatible loop firm order functionality in a Beta testing environment. The pre-ordering functionality for xDSL is targeted for deployment into the production environment in mid-to-late November 2000. Some defects for the ordering functionality discovered during Beta

testing still remain. BellSouth is working with Telcordia to establish dates when the defects will be corrected. As a result, the ordering functionality for xDSL will be delayed beyond the targeted November implementation date.

Firm Order Line Sharing based on the vendor solution provided by

Telcordia does not have a firm schedule established. In cooperation with
the CLEC Line Sharing collaborative teams, BellSouth has implemented a
an interim solution in the existing systems to allow mechanized firm
ordering of CO-based BellSouth-owned splitter Line Sharing. This
solution was implemented into the production environment on September
30, 2000. This interim solution is targeted to be supplemented and
replaced utilizing the Telcordia solution in mid-to-late 2001. BellSouth
plans to also offer mechanized firm order of CO-based CLEC owned
splitter Line Sharing and Remote Line Sharing. These products are being
developed jointly in the Line Sharing Collaborative teams and will be
mechanized as they are developed.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

21 A. Yes. 22

\_\_

1	BELLSOUTH TELECOMMUNICATIONS, INC.
2	DIRECT TESTIMONY OF D. DAONNE CALDWELL
3	BEFORE THE TENNESSEE REGULATORY AUTHORITY
4	DOCKET NO. 00-00544
5	NOVEMBER 13, 2000
6	
7	Q. PLEASE STATE YOUR NAME, ADDRESS AND OCCUPATION.
8	
9	A. My name is D. Daonne Caldwell. My business address is 675 W.
10	Peachtree St., N.E., Atlanta, Georgia. I am a Director in the Finance
11	Department of BellSouth Telecommunications, Inc. (hereinafter referred to
12	as "BellSouth"). My area of responsibility relates to the development of
13	economic costs.
14	
15	Q. PLEASE PROVIDE A BRIEF DESCRIPTION OF YOUR EDUCATIONAL
16	BACKGROUND AND WORK EXPERIENCE.
17	
18	A. I attended the University of Mississippi, graduating with a Master of
19	Science Degree in mathematics. Additionally, I have attended numerous
20	Bell Communications Research, Inc. ("Bellcore") courses and outside
21	seminars relating to service cost studies and economic principles.
22	
23	My initial employment was with South Central Bell in 1976 in the Tupelo,
24	Mississippi, Engineering Department where I was responsible for Outside
25	Plant Planning. In 1983, I transferred to BellSouth Services, Inc. in

1 Birmingham, Alabama, and was responsible for the Centralized Results System Database. I moved to the Pricing and Economics Department in 2 1984 where I developed methodology for service cost studies until 1986 3 when I accepted a rotational assignment with Bellcore. While at Bellcore, I 4 was responsible for development and instruction of the Service Cost 5 6 Studies Curriculum including courses, such as, "Concepts of Service Cost Studies", "Network Service Costs", "Nonrecurring Costs", and "Cost 7 8 Studies for New Technologies". In 1990, I returned to BellSouth and was appointed to a position in the cost organization, now part of the Finance 9 10 Department, with the responsibility of managing the development of cost 11 studies for transport facilities, both loop and interoffice. My current responsibilities encompass cost methodology development and the overall 12 coordination of cost study and interrogatory response filings. Additionally, I 13 14 participate in cost-related dockets as an expert witness on cost issues.

15

#### Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

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A. The purpose of my testimony is to present and support the cost study results for the unbundled network elements ("UNEs") both those previously filed in this docket and for those attached to this testimony. Additionally, I describe the underlying cost methodology used in these studies. BellSouth witness, Mr. John Ruscilli, addresses the rates BellSouth is proposing that are based upon these costs.

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25

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#### Q. WHY DID BELLSOUTH FILE COST STUDIES IN THIS DOCKET?

1

A. In its May 9, 2000 Director's Conference, the Tennessee Regulatory 2 Authority ("TRA") opened Docket No. 00-00544 and specified the elements 3 for which BellSouth needed to provide cost support; Intra-building Cable, 4 Network Terminating Wire and Line Sharing, such that permanent cost-5 based rates could be established. BellSouth fulfilled the TRA's directive 6 with a June 30, 2000 filing. Subsequently, the TRA expanded the scope of 7 8 this docket to include all elements that may be subject to arbitration as a result of the Federal Communications Commission's ("FCC's") Third 9 10 Report and Order. BellSouth filed additional cost support on October 2, 11 2000 with respect to these UNEs. The TRA also ordered that BellSouth allow competitors to purchase and install splitters in a line sharing 12 arrangement. BellSouth filed additional cost support in response to this 13 order on October 20, 2000. BellSouth also included cost support for 14 additional combinations in the October 20, 2000 filing. Additionally, 15 attached to this docket as Exhibit DDC-1 are revised nonrecurring costs for 16 xDSL loops, i.e., ADSL, HSDL, and unbundled copper loops ("UCLs"), 17 Loop Conditioning, and Loop Make-up. Also, revisions to some line 18 sharing nonrecurring costs have been made and additional elements have 19 been identified that are required for line sharing. Exhibit DDC-1 20 21 supercedes the nonrecurring costs that were filed previously for these 22 elements. A summary of the costs that changed from those previously filed is attached as Exhibit DDC-2. 23

24

1	Q. PLEASE EXPLAIN WHY BELLSOUTH REVISED THE NONRECURRING
2	COSTS FOR XDSL LOOPS AND LINE SHARING.

3

A. The provisioning of xDSL and Line Sharing UNEs is an evolving process, such that BellSouth is constantly reviewing its projected time estimates and provisioning processes. Updates to work time estimates, work groups, and some underlying assumptions from the study filed previously in this docket are reflected in Exhibit DDC-1. As Exhibit DDC-2 reflects, the vast majority of the costs decreased. Exhibit DDC-3 outlines the changes that were made that impacted the cost results.

11

# Q. WERE THE ELEMENTS FILED IN THIS DOCKET PREVIOUSLY SUBMITTED TO THE TENNESSEE REGULATORY AUTHORITY ("TRA") FOR REVIEW IN THE GENERIC DOCKET NO. 97-01262?

15

A. No. The elements submitted in this docket are the result of the Federal 16 Communications Commission's ("FCC's") Third Report and Order, in which 17 additional unbundled network elements ("UNEs") were defined. Thus, the 18 TRA was never given the opportunity to review these costs in Docket No. 19 97-01262 (the generic cost docket). However, let me emphasize that 20 BellSouth followed the methodology and inputs established by the TRA in 21 22 Docket No. 97-01262. I will expand on this statement later in my testimony. 23

24

#### 25 Q. WHAT TYPES OF COSTS ARE REFLECTED IN THE COST STUDY?

1 A. The cost study reflects both recurring and nonrecurring costs. Recurring costs include both capital and non-capital costs. Capital costs are 3 associated with the purchase of an item of plant, i.e., an investment. They 4 consist of depreciation, cost of money, and income tax. Non-capital 5 recurring costs are expenses associated with the use of an investment. 6 These operating expenses consist of plant-specific expenses, such as, 7 8 maintenance, ad valorem taxes and gross receipts taxes. 9 10 Nonrecurring costs are one-time expenses associated with provisioning, 11 installing and disconnecting the network capability. These costs generally include five major categories of activity: service inquiry, service order, 12 engineering, connect and test, and technician travel time. 13

14

15

### Q. IS BELLSOUTH'S COST STUDY CONSISTENT WITH THE FCC's COSTING METHODOLOGY?

17

16

18 A. Yes. BellSouth's cost methodology is not only compliant with the Act, but 19 also with the FCC's First Report and Order. BellSouth utilized the FCC's 20 published Total Element Long Run Incremental Cost ("TELRIC") 21 methodology as a guideline in producing cost support for unbundled 22 network elements. Thus, the costs are forward-looking and reflect an 23 efficient network design based on existing wire center locations.

24

1		Specifically, BellSouth's cost study is consistent with the FCC's costing
2		methodology as set forth in FCC Rule 51.505 (Forward-looking economic
3		cost) which defines the FCC's cost methodology for unbundled network
4		elements. Pursuant to the FCC's rules, such costs must be developed
5		using an efficient network configuration that uses the existing location of
6		the Incumbent Local Exchange Carrier's ("ILEC's") wire centers. Further,
7		the costs should be developed using a forward-looking cost of capital and
8		economic depreciation rates, and a reasonable allocation of forward-
9		looking common costs is appropriate. The forward-looking economic costs
10		may not include embedded costs, retail costs, opportunity costs or
11		revenues to subsidize other services.
12		
13	Q.	HAS THE IMPACT OF THE EIGHTH CIRCUIT COURT'S RECENT
13 14	Q.	HAS THE IMPACT OF THE EIGHTH CIRCUIT COURT'S RECENT DECISION BEEN REFLECTED IN BELLSOUTH'S COST
	Q.	
14 15	Q.	DECISION BEEN REFLECTED IN BELLSOUTH'S COST
14 15 16		DECISION BEEN REFLECTED IN BELLSOUTH'S COST
14		DECISION BEEN REFLECTED IN BELLSOUTH'S COST DEVELOPMENT?
14 15 16 17		DECISION BEEN REFLECTED IN BELLSOUTH'S COST DEVELOPMENT?  No. On July 18, 2000, the United States Court of Appeals for the Eighth
14 15 16 17		DECISION BEEN REFLECTED IN BELLSOUTH'S COST DEVELOPMENT?  No. On July 18, 2000, the United States Court of Appeals for the Eighth Circuit issued an opinion that struck down the FCC's TELRIC pricing rule.
114 115 116 117 118		DECISION BEEN REFLECTED IN BELLSOUTH'S COST DEVELOPMENT?  No. On July 18, 2000, the United States Court of Appeals for the Eighth Circuit issued an opinion that struck down the FCC's TELRIC pricing rule. The Court held that unbundled network element costs should be
114 115 116 117 118 119 220		DECISION BEEN REFLECTED IN BELLSOUTH'S COST DEVELOPMENT?  No. On July 18, 2000, the United States Court of Appeals for the Eighth Circuit issued an opinion that struck down the FCC's TELRIC pricing rule. The Court held that unbundled network element costs should be determined using forward-looking costs of the incumbent local exchange
114 115 116 117 118 119 220 221		DECISION BEEN REFLECTED IN BELLSOUTH'S COST DEVELOPMENT?  No. On July 18, 2000, the United States Court of Appeals for the Eighth Circuit issued an opinion that struck down the FCC's TELRIC pricing rule. The Court held that unbundled network element costs should be determined using forward-looking costs of the incumbent local exchange company's ("ILEC's") existing network rather than on the costs of a

cost methodology for UNEs; further, the full impact of that decision will not

be known until the appeal process is concluded. Therefore, BellSouth has 1 not made any changes to the underlying TELRIC methodology to reflect 2 the anticipated effect of the Eighth Circuit Court's decision. Thus, 3 BellSouth's costs are forward-looking, but are conservative (low) based on 4 the Eighth Circuit's opinion. Additionally, on September 25, 2000, the 5 Eighth Circuit granted a stay of the TELRIC decision stating that its 6 decision "is stayed pending the filing and ultimate disposition of a petition 7 8 for certiorari with the Supreme Court." Thus, the timing of the final ruling on the Eighth Circuit's decision is pending and BellSouth reserves its right 9 10 to revise its cost study once a final decision is reached with respect to this 11 litigation.

12

## Q. WHAT COST METHODOLOGY WAS USED IN THE COST STUDY SUBMITTED IN THIS DOCKET?

15

A. The cost study is based on the study methodology established by the TRA 16 in its Order in Docket No. 97-01262. The TRA's response to Issue 1 in the 17 Interim Order<sup>1</sup> established the cost methodology that should provide the 18 foundation for both the cost models and the inputs. Page 8 of the Interim 19 Order states: "The Authority finds that prices should be established using 20 the forward-looking economic cost methodology as defined by the FCC's 21 22 TELRIC methodology, including an appropriate markup for the recovery of shared and common costs. This methodology ensures that costs used to 23

24

<sup>&</sup>lt;sup>1</sup> Issue 1: What cost methodology should the TRA use in setting interconnection and Unbundled Network Elements ("UNE") prices?

2		an efficient firm using the least-cost technology." In establishing the
3		pricing standard as TELRIC economic cost, the TRA has also determined
4		that the TELRIC economic cost methodology should be followed for
5		developing the costs.
6		
7	Q.	PLEASE PROVIDE SOME BACKGROUND TO DOCKET NO. 97-01262.
8		
9	A.	BellSouth filed cost studies to support permanent prices for various
10		network elements that were contained in BellSouth's interconnection
11		agreements or for which the TRA had previously established interim rates.
12		The studies were filed electronically with complete documentation. With
13		these studies, BellSouth introduced a new cost model, the TELRIC
14		Calculator <sup>©</sup> . The TELRIC Calculator converts material prices and labor
15		work times to cost.
16		
17	Q.	ARE THE ADJUSTMENTS TO BELLSOUTH'S INPUTS ORDERED BY
18		THE TRA IN DOCKET NO. 97-01262 INCORPORATED IN THE COST
19		STUDY RESULTS PRESENTED IN THIS DOCKET?
20		
21	A.	Yes. The TRA-ordered inputs that are relevant to the cost elements in this
22		proceeding are included. For example, the cost study includes the TRA-
23		ordered cost of money, depreciation lives, and shared and common
24		
25		
	<sup>©</sup> 19	97 BellSouth Corporation All Rights Reserved

set prices for UNEs will reflect the inputs, quantities, and prices faced by

1

-8-

1	factors.	
2		
3	Q. PLEASE ELABORATE ON THE TRA-ORDERED ADJUSTMENTS	
4	BELLSOUTH INCORPORATED IN THE COST STUDY TO FULFILL	
5	THE TRA'S INTERIM ORDER IN DOCKET NO. 97-01262.	
6		
7	A. I will address each of the adjustments included in this filing and reference	
8	the issue and the appropriate discussion from the TRA's Interim Order in	
9	Docket No. 97-01262. The cost studies submitted in this docket follow the	Э
10	intent of each TRA adjustment. Where appropriate, the inputs have been	
11	updated to reflect the study period, 2000-2002.	
12		
13	First, the TRA adopted ACSI's recommended markup of 15% to account	
14	for shared and common costs. (Page 11 of the Interim Order.) This	
15	adjustment was "hard coded" into BellSouth's TELRIC Calculator's Share	d
16	and Common cost module included in this filing.	
17		
18	Second, the TRA originally adjusted the loop fill factors in its Interim	
19	Order. (Page 12 of the Interim Order) However in its Reconsideration	
20	Ruling (11/3/99), the TRA modified this ruling and stated, "that the fill	
21	factors as proposed by BellSouth are more reasonable and should be	
22	adopted." (Page 10 Reconsideration Ruling)	
23		
24	Third, the TRA mandated that the models use Tennessee-specific	
25	depreciation lives, salvage values and other inputs used in calculating the	<u>}</u>

1	depreciation rates as established by the former Tennessee Public Service
2	Commission in Docket No. 92-13527. (Page 13 of the Interim Order)
3	The ordered depreciation rates were incorporated into the study included
4	in this docket.
5	
6	Fourth, BellSouth's cost study reflects the following adjustments ordered
7	by the TRA: (1) overall cost of capital of 10.46%; (2) debt ratio of 40%; (3)
8	7.30% cost of debt; (4) equity ratio of 60%; (5) 12.46% cost of equity.
9	(Page 15 of the Interim Order) Refer to the seventh point, below, for
10	further discussion of cost of capital input.
11	
12	Fifth, the TRA directed that BellSouth's normalized 1996 plant specific
13	expense should be reduced by 22.5% for calculating network
14	maintenance expense. (Page 17 of the Interim Order) However, in the
15	April 20, 1999 Director's Conference, the TRA reconsidered this aspect of
16	the Interim Order and limited the 22.5% reduction to network operations
17	expenses only. (Page 10 of the Transcript) The April 20, 1999 adjustment
18	is reflected in this filing.
19	
20	Sixth, the TRA originally adjusted the ad valorem tax to reflect the actual
21	1998 tax rate of .0116. (Page 17 of the Interim Order) This input was used
22	in this filing.
23	
24	Seventh, the TRA concluded that unbundled network elements should be
25	priced in a manner that considers the time value of money by employing

1 monthly compounding in calculating the monthly rate from an annual cost. (Page 18 of the Interim Order) In other words, BellSouth was ordered to 2 reflect monthly compounding using the approved overall cost of money of 3 10.46%. This methodology was reflected in BellSouth's cost study and in 4 effect changed the cost of money to 9.93%. 5 6 Eighth, the TRA ordered that the drop length be adjusted to 100'. (Page 7 8 19 of the Interim Order) This input was used in the calculation of UCL costs in this docket. Additionally since BellSouth no longer uses contract 9 10 labor to place drops, the adjustment to the labor component is not 11 necessary. 12 Ninth, The TRA adjusted the distribution of residential and business loops 13 to 69.22% residential and 30.78% business. (Page 22 of the Interim 14 Order) This distribution was reconsidered by the TRA and changed to 15 62.89% (residential) and 37.11% (business). This mix of residential and 16 business loops was utilized in the study submitted in this docket. 17 18 Tenth, the TRA found that "BST's TELRIC Calculator model should be 19 adjusted to reflect three (3) other entities equally sharing aerial support 20 structures (poles) with BST for a total of four (4)." (Page 27 of the Interim 21 22 Order) This adjustment was incorporated in this filing. 23 24 Eleventh, the TRA concluded that only direct costs should be recovered 25 through nonrecurring charges. (Page 31 of the Interim Order) Thus,

BellSouth has removed shared and common costs from the calculation of 1 nonrecurring costs. Because of this aspect of the Interim Order, BellSouth 2 had to make two computer runs. A run was made using a common cost 3 factor of 15% (which the TRA established in response to Issue 3) to 4 calculate recurring costs. Then another run was made using a common 5 6 cost factor of zero to calculate no nrecurring costs. Both runs are contained on the CD-ROM, one labeled Recurring (15% common cost 7 8 factor) and the other Nonrecurring (0% common cost factor).

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Twelfth, the TRA ordered a fallout rate of 7% for unbundled network element orders and three minutes of work activity by the Local Customer Service Center ("LCSC"). (Page 33 of the Interim Order) However, in response to BellSouth request for reconsideration at the April 20, 1999 Director's Conference, the TRA decided that "BellSouth's model should be adjusted to reflect 15 minutes of work time to resolve a fallout situation that will occur 7 percent of the time." (Page 18 of the Transcript) The April 20, 1999 clarification was included in this filing.

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Thirteenth, the TRA determined that "BST should adjust its TELRIC Calculator model to recover all costs associated with testing in recurring rates." (Page 34 of the Interim Order) Thus, BellSouth removed the testing times from the nonrecurring cost development and recovered these costs as part of the recurring rates.

24

25

Finally, the TRA determined that disconnect costs should be separated

1		from installation costs and assessed at the time of disconnect. (Page 35 of
2		the Interim Order). BellSouth presents disconnect costs separately from
3		installation costs. <sup>2</sup>
4		
5	Q.	THE FCC'S THIRD REPORT AND ORDER INCREASED THE LIST OF
6		UNES BELLSOUTH IS OBLIGATED TO PROVIDE. PLEASE BRIEFLY
7		DESCRIBE THE "NEW" ELEMENTS THAT ARE INCLUDED IN
8		BELLSOUTH'S COST STUDY.
9		
10	A.	The FCC listed eight basic types of network elements that must be
11		unbundled: (1) Loops, (2) Subloops, (3) Network Interface Device ("NID"),
12		(4) Circuit Switching, (5) Packet Switching (only in limited circumstances),
13		(6) Interoffice Transmission Facilities, (7) Signaling and Call-Related
14		Databases, and (8) Operational Support Systems ("OSS"). I will describe
15		each of these categories individually and detail the new elements
16		BellSouth is presenting with this filing.
17		
18	Q.	PLEASE DESCRIBE THE DIFFERENT TYPES OF LOOPS BELLSOUTH
19		INCLUDED IN THIS STUDY.
20		
21	A.	First let me state that the FCC's Third Report and Order did not alter the
22		definition of a loop with respect to the manner in which BellSouth
23		
24		ellSouth's inclusion of the TRA's adjustments should not be
25	cor dis	nstrued as an endorsement of the modifications. In fact, BellSouth sagrees with many aspects of the TRA's adjustments and reserves the 19th to challenge these modifications.

conducted its cost studies. The FCC's definition reads as follows: 1 2 The local loop network element is defined as a transmission 3 facility between a distribution frame (or equivalent) in an 4 incumbent LEC central office and the loop demarcation point 5 6 at an end-user customer premises, including inside wire owned by the incumbent LEC. (Appendix C, Page 3 of the 7 8 FCC Third Report and Order) 9 10 The cost studies BellSouth submitted both in Docket No. 97-01262 and in 11 this proceeding comply with this definition. 12 The FCC's Third Report and Order did, however, emphasize BellSouth's 13 obligation to offer xDSL compatible loops. BellSouth previously submitted 14 costs for various types of xDSL loops in Docket No. 97-01262, including 15 ADSL and HDSL compatible loops. (These loops meet the transmission 16 requirements set for ADSL and HDSL service.) The TRA is in the process 17 of establishing both recurring and nonrecurring rates based upon 18 BellSouth's compliance filings in Docket No. 97-01262 for these elements. 19 However, BellSouth has re-studied the nonrecurring costs associated with 20 21 these types of loops in this proceeding because the provisioning process 22 has changed radically since the studies were initially conducted. Specifically, the nonrecurring cost structure now reflects that fact that the 23 CLEC can qualify the loop, instead of BellSouth. 24

1 Additionally, for this proceeding, BellSouth has developed recurring and nonrecurring costs for 2-wire and 4-wire UCLs; e.g., the CLEC can offer a 2 variety of xDSL services. The costs are segmented between loops less 3 than 18,000 feet ("UCL-Short") and loops greater than 18,000 feet ("UCL-4 Long"). The UCLs are commonly referred to as "dry copper" loops 5 because they have no intervening equipment such as load coils, bridged 6 tap, or repeaters between the end user premises and the serving wire 7 8 center. Another type of xDSL loop that BellSouth is offering is a Universal Digital Channel ("UDC"). The UDC is similar to an ISDN loop except that it 9 10 follows stricter provisioning guidelines, such that the CLEC can 11 concatenate the 3 "ISDN" channels into a single 144 KBPS circuit. 12 Even though it is not classified as a distinct UNE, the FCC discussed Loop 13 Conditioning as it relates to the provisioning of xDSL compatible loops in its 14 Third Report and Order. BellSouth offers three types of Loop Conditioning 15 (Loop Modification ("ULM")), Load Coil/ Equipment Removal – Short, Load 16 Coil/Equipment Removal – Long, and Bridged Tap Removal. This 17 structure appropriately reflects the way in which the costs to provide this 18 service will occur. Costs were developed for removing load coils from 19 loops less than 18,000 feet and for loops greater than 18,000 feet. In its 20 study, BellSouth assumed for loops less than 18,000 feet, 10 pairs will be 21 22 conditioned (load coils removed) at the same time. This is based on projected demand for the conditioned loops. Additionally, for loops less 23 than 18,000 feet the impact of this procedure on voice grade service will be 24 25 minimal since load coils neither enhance nor impair the quality of voice

1 transmission for loops of that length. For loops greater than 18,000 feet, however, the removal of intermediary electronics (e.g., load coils) would 2 likely degrade the voice grade transmission quality, rendering it unusable 3 for voice grade transmission. To minimize the quantity of voice grade 4 circuits that will be unavailable for transmission of voice grade level 5 service, BellSouth practices assume only two circuits will be conditioned 6 initially. Bridged tap removal assumed three bridge taps are removed, one 7 8 in the underground and the other two buried or aerial. 9 10 Certain CLECs have argued that intermediary devices are not required for 11 loops less than 18,000 feet, and thus, that BellSouth is not entitled to recover costs to remove those devices. The FCC addressed such 12 arguments and stated: "We agree that networks built today normally should 13 not require voice-transmission enhancing devices on loops of 18,000 feet 14 or shorter. Nevertheless, the devices are sometimes present on such 15 loops, and the incumbent LEC may incur costs in removing them. Thus, 16 under our rules, the incumbent should be able to charge for conditioning 17 such loops." (¶193, FCC CC Docket 96-98 Third Report and Order) 18 19 The FCC also mandated that BellSouth offer loops at higher transmission 20 rates, i.e., greater than a DS1. Thus, in this filing BellSouth determined the 21 22 cost of DS3, OC3, OC12, OC48, and STS-1 loops and local channels. 23 Q. DESCRIBE THE ELEMENTS BELLSOUTH INCLUDED UNDER THE 24 SUBLOOP/ NID CATEGORIES.

1

25

2	Α.	BellSouth has developed costs for Unbundled Sub-Loops that are 2-wire or
3		4-wire components of a loop that can be technically unbundled. Sub-
4		Loops consist of Sub-Loop Feeder ("USL-F"), Sub-Loop Distribution ("USL-
5		D"), Unbundled Intra-building Network Cable ("UINC"), and Unbundled
6		Network Terminating Wire ("UNTW"). USL-F is also provided for the DS1
7		digital loop.
8		
9		Sub-loop feeder is the physical transmission facility (or channel or group of
10		channels on such facility) which extends from the main distributing frame
11		connection in the end office to the cross-connect box. If the loop is served
12		by digital loop carrier, a central office digital loop carrier terminal is required
13		to convert the digital signal to voice grade analog. A test point is
14		provisioned with the sub-loop feeder for remote test access.
15		
16		Sub-loop distribution is the physical transmission facility from a BellSouth
17		cross-connect device to the customer's premises (i.e., the Network
18		Interface Device ("NID")). This facility will allow an end user to send and
19		receive telecommunications traffic when it is properly connected to other
20		required network elements, such as loop feeder facility. This facility
21		includes a NID (where applicable) at the customer's location in the loop.
22		
23		BellSouth will also provide sub-loop interconnection to the Unbundled
24		Intrabuilding Network Cable ("UINC"). UINC is the distribution facility

inside a subscriber's building or between buildings on one customer's

1 premises (continuous property not separated by a public street or road). UINC includes the facility from the cross-connect device in the building 2 equipment room up to and including the end-user's point of demarcation. 3 4 Unbundled Network Terminating Wire ("UNTW") is unshielded twisted 5 copper wiring that is used to extend circuits from an INC terminal or from a 6 building entrance terminal to an individual customer's point of demarcation. 7 8 It is the last segment of the field-side loop distribution facilities. In multisubscriber configurations, UNTW represents the point at which the network 9 10 branches out to serve individual subscribers. 11 UNTW will be provided in Multi-Dwelling Units ("MDUs") and/or Multi-12 Tenants Units ("MTUs") where BellSouth provides wiring all the way to the 13 end-users premises. BellSouth will not provide this element in those 14 locations where the property owner provides the wiring to the end user's 15 premises or where the property owner will not allow BellSouth to place its 16 facilities to the end user. 17 18 Another group of elements that can be classified as "sub-loop" is 19 unbundled sub-loop concentration ("USLC"). These elements allow a 20 21 CLEC to concentrate loop distribution elements, provided by the CLEC, on 22 to multiple DS1s. This arrangement allows the CLEC to connect the loop distribution elements (at a concentrated level) to BellSouth's feeder 23 facilities. BellSouth will then transport the DS1s carrying the distribution 24 25 circuits back to the serving wire center for termination on a BellSouth DSX1

1 block and ultimately to the CLEC's collocation space. 2 I have discussed loop modification (conditioning) previously. To reflect the 3 possibility that the CLEC may only purchase distribution from BellSouth 4 and that conditioning may be required, BellSouth offers the following 5 6 elements: Unbundled Sub-Loop Modification - 2W/4W Copper Distribution Load 7 8 Coil/Equipment Removal and Unbundled Sub-Loop Modification - 2W/4W Copper Distribution Bridged Tap Removal. Mr. Ruscilli addresses the rates 9 10 BellSouth is proposing for these sub-loop elements in his testimony, while 11 Mr. Milner discusses sub-loop access. 12 Q. DOES THE FCC'S THIRD REPORT AND ORDER AFFECT THE COST 13 SUPPORT REQUIRED FOR THE NID? 14 15 A. The FCC's UNE Third Report and Order does not affect the costs 16 previously provided to the TRA and upon which the TRA will ultimately 17 establish rates for NIDs. However, the FCC modified the definition of the 18 NID to include "any means of interconnection of customer premises wiring 19 to the incumbent LEC's distribution plant, such as a cross-connect device 20 used for that purpose." (¶233 of the FCC Third Report and Order) 21 22 Therefore, in this filing, BellSouth has determined the nonrecurring cost associated with establishing a cross-connect in conjunction with a NID. 23 24

- NID access is designed to allow a CLEC the opportunity to connect its loop 1 to the inside wire accessed through BellSouth's NID. It is expected that the 2 CLEC will provision a loop and a NID to the customer's location. In these 3 circumstances, the CLEC may perform a physical cross-connect of the 4 inside wire to its loop to provide a communication pathway from the CLEC 5 through BellSouth's NID to the end user's inside wire. 6 7 8 If BellSouth does not have a NID, i.e., it terminates its loops directly to the inside wire of the end user, or where the existing NID is not suitable for 9 10 connection, BellSouth will install a NID. Also, at the CLEC's request, 11 BellSouth will install a second NID and will provide the cross-connect from the BellSouth NID to the CLEC NID. 12 13 Q. HAS BELLSOUTH DEVELOPED COSTS FOR CIRCUIT SWITCHING? 14 15 A. Not in this docket. Since the TRA will ultimately set rates for Unbundled 16 Switching and Local Interconnection based on costs submitted in Docket 17 No. 97-01262, it is unnecessary to re-file cost support. Additionally, the 18 FCC's Third Report and Order did not alter the existing definition of Local 19 Switching. However, the FCC's order did find that incumbent LECs will be 20 21 relieved of its obligation to provide local circuit switching under certain 22 circumstances that will be discussed by Mr. Ruscilli. 23
- Q. DID BELLSOUTH DEVELOP COSTS FOR UNBUNDLED PACKETSWITCHING?

1		
2	A.	No. Rather, BellSouth has developed the cost associated with allowing a
3		CLEC to collocate in the remote terminal and has filed those costs in this
4		proceeding. Mr. Ruscilli addresses the issue of unbundling packet
5		switching in greater detail in his testimony.
6		
7	Q.	ARE THERE ANY NEW ELEMENTS FOR INTEROFFICE
8		TRANSMISSION FACILITIES?
9		
10	A.	Yes. As with loops, the FCC ordered that BellSouth provide interoffice
11		facilities at higher transmission rates. Thus, costs were developed for both
12		dedicated and shared interoffice facilities at DS3, OC3, OC12, OC48, and
13		STS-1 transmission rates.
14		
15	Q.	WHAT IS BELLSOUTH OFFERING TO COMPLY WITH THE
16		REQUIREMENT TO UNBUNDLE CALL-RELATED DATABASES AND
17		SIGNALING?
18		

A. BellSouth previously submitted costs for 800 Access, Line Information

Database ("LIDB") Access, and CCS7 Signaling Transport in Docket No.

97-01262. The TRA will establish rates based upon BellSouth's costs for

these items. In this docket, BellSouth is augmenting its list of database

access items to include Calling Name ("CNAM"), Local Number Portability

("LNP"), and E911.

#### Q. HAS BELLSOUTH DEVELOPED ADDITIONAL COST SUPPORT FOR OSS ACCESS? 2 3 A. No. BellSouth submitted cost support associated with the development, implementation, and on-going support of electronic interfaces to 5 BellSouth's ordering systems in Docket No. 97-01262. BellSouth 6 developed electronic interfaces that allow CLECs access to BellSouth's 7 8 existing legacy systems, as directed in Paragraph 523 of the FCC's First Report and Order which states: 9 10 11 We thus conclude that an incumbent LEC must provide nondiscriminatory access to their operations support 12 systems functions for pre-ordering, ordering, provisioning, 13 maintenance and repair, and billing available to the LEC 14 itself. 15 16 The FCC's Third Report and Order did not change this requirement. 17 However, the order did mandate that BellSouth enable CLEC access to 18 loop make-up information as part of the ordering process. 19 20 Q. DID BELLSOUTH DEVELOP COSTS FOR ACCESS TO LOOP MAKE-21 **UP AS STIPULATED IN THE FCC'S THIRD REPORT AND ORDER?** 22

A. Yes. BellSouth developed costs that reflect accessing loop make-up information via two methods, either through an electronic interface or

ı	manually. If the OLEC chooses the mechanized process, the Loop
2	Facilities Assignment and Control System ("LFACS") database is
3	accessed and interactive loop data extracts based on search criteria can
4	be made. In the cost study, element J.3.1 (Mechanized Loop Make-up)
5	reflects the costs BellSouth incurs in providing the CLEC access to
6	LFACS via this mechanized process.
7	
8	BellSouth also offers the CLEC a manual process. The manual process
9	begins with the CLEC initiating a service inquiry requesting loop make-up
10	information. BellSouth personnel manually develop the loop make-up and
11	provide the CLEC a copy. In the cost study, element J.3.3 (Manual Loop
12	Make-up) reflects the costs BellSouth incurs in performing these activities.
13	
14	Q. ARE THERE ARE OTHER ELEMENTS BELLSOUTH IS OFFERING
15	THAT WERE NOT INCLUDED IN DOCKET NO. 97-01262?
16	
17	A. Yes. The FCC's Third Report and Order also stated that the incumbent
18	must test and report troubles on conditioned loops for the line's features,
19	functions, and capabilities. (¶195) Thus, BellSouth determined the costs
20	associated with testing beyond voice and incorporated such costs in its
21	filing.
22	
23	Additionally, the FCC's Advanced Service Order revised some of the
24	elements BellSouth had to offer under physical collocation. BellSouth

2		Sharing. BellSouth is obligated to "share" the existing physical loop by
3		segmenting the bandwidth. This study reflects the costs of providing such
4		an arrangement in BellSouth's central office.
5		
6	Q.	PLEASE SUMMARIZE YOUR TESTIMONY.
7		
8	A.	The TRA has ruled on the appropriate methodology for developing costs
9		for unbundled network elements - TELRIC economic costs. BellSouth
10		utilized the principles inherent in this methodology for its cost study filed
11		with this testimony. Thus, the incremental recurring and nonrecurring costs
12		are long-run and reflect an efficient, forward-looking, yet attainable,
13		network. It is also BellSouth's opinion that if the Eighth Circuit's TELRIC
14		ruling is affirmed, the costs determined by this methodology are
15		understated.
16		
17	Q.	DOES THIS CONCLUDE YOUR TESTIMONY?
18		
19	A.	Yes.
20		
21		
22		
23		
24		
25		

the remote terminal. The Advanced Services Order also addressed Line

1		BELLSOUTH TELECOMMUNICATIONS, INC.
2		DIRECT TESTIMONY OF JOHN A. RUSCILLI
3		BEFORE THE TENNESSEE REGULATORY AUTHORITY
4		DOCKET NO. 00-00544
5		NOVEMBER 13, 2000
6		
7	Q.	PLEASE STATE YOUR NAME, YOUR POSITION WITH BELLSOUTH
8		TELECOMMUNICATIONS, INC. ("BELLSOUTH") AND YOUR BUSINESS
9		ADDRESS.
10		
11	A.	My name is John A. Ruscilli. I am employed by BellSouth as Senior Director for
12		State Regulatory for the nine-state BellSouth region. My business address is 675
13		West Peachtree Street, Atlanta, Georgia 30375.
14		
15	Q.	PLEASE PROVIDE A BRIEF DESCRIPTION OF YOUR BACKGROUND
16		AND EXPERIENCE.
17		
18	A.	I attended the University of Alabama in Birmingham where I earned a Bachelor of
19		Science Degree in 1979 and a Master of Business Administration in 1982. After
20		graduation I began employment with South Central Bell as an Account Executive in
21		Marketing, transferring to AT&T in 1983. I joined BellSouth in late 1984 as an
22		analyst in Market Research, and in late 1985 moved into the Pricing and Economics
23		organization with various responsibilities for business case analysis, tariffing, demand
24		analysis and price regulation. I served as a subject matter expert on ISDN tariffing
25		in various commission and public service commission ("PSC") staff meetings in
		Tennessee, Florida, North Carolina and Georgia. I later moved into the State

1		Regulatory and External Affairs organization with responsibility for implementing both
2		state price regulation requirements and the provisions of the Telecommunications Act
3		of 1996 ("the Act"), through arbitration and 271 hearing support. In July 1997, I
4		became Director of Regulatory and Legislative Affairs for BellSouth Long Distance,
5		Inc., with responsibilities that included obtaining the necessary certificates of public
6		convenience and necessity, testifying, Federal Communications Commission
7		("FCC") and PSC support, federal and state compliance reporting and tariffing for
8		all 50 states and the FCC. I assumed my current position in July 2000.
9		
10	Q.	WHAT IS THE PURPOSE OF YOUR TESTIMONY?
11		
12	A.	The Tennessee Regulatory Authority ("Authority") opened this docket to establish
13		rates for certain unbundled network elements ("UNEs"). My testimony addresses
14		the policy issues related to the cost studies and price development for the UNEs that
15		BellSouth offers to Competitive Local Exchange Carriers ("CLECs") outlined by the
16		FCC in its Third Report and Order in CC Docket No. 96-98, Implementation of the

17 Local Competition Provisions of the Telecommunications Act of 1996, issued

18

20

21

23

25

19 Docket No. 98-147 and Fourth Report and Order in CC Docket No. 96-98 ("Line

Sharing Order"). The following areas are discussed in my testimony: 1) the policy

foundations underlying the proposed rates; 2) the effect of the proposed rates on

November 5, 1999 ("UNE Remand Order") and its Third Report and Order in CC

implementation of those policies; and 3) the development of the proposed rates.

24 Q. GENERALLY, WHAT IS THE PURPOSE OF THIS PROCEEDING?

A. The FCC's UNE Remand Order identified additional UNEs that must be offered to

1		CLECs and the Line Sharing Order identified the high frequency portion of the loop,
2		also referred to as line sharing, as a new UNE. Also, pursuant to the requirements
3		of FCC Rule 51.507(f), state commissions must establish different rates (prices) for
4		certain UNEs in at least three cost-related rate zones within the state to reflect
5		geographic cost differences. Therefore, the primary goal of this proceeding is to
6		establish rates (including geographically deaveraged rates where appropriate) for the
7		additional UNEs that the FCC identified in its UNE Remand Order and its Line
8		Sharing Order. The rates the Authority establishes is this proceeding will replace,
9		subject to true-up, the interim rates that the Authority has previously established.
10		
11	Q.	BRIEFLY DESCRIBE THE COST STUDIES BELLSOUTH IS SUPPORTING
12		IN THIS PROCEEDING.
13		
14	A.	In Docket No 97-01262, the Authority instructed that various adjustments be made
14 15	A.	In Docket No 97-01262, the Authority instructed that various adjustments be made to the Total Element Long Run Incremental Cost ("TELRIC") initially filed by
	A.	
15	A.	to the Total Element Long Run Incremental Cost ("TELRIC") initially filed by
15 16	A.	to the Total Element Long Run Incremental Cost ("TELRIC") initially filed by BellSouth. BellSouth's witness Ms. Daonne Caldwell sponsors the cost studies that
15 16 17	A.	to the Total Element Long Run Incremental Cost ("TELRIC") initially filed by BellSouth. BellSouth's witness Ms. Daonne Caldwell sponsors the cost studies that BellSouth filed on October 2, 2000 in this proceeding. As she explains in detail,
15 16 17 18	A.	to the Total Element Long Run Incremental Cost ("TELRIC") initially filed by BellSouth. BellSouth's witness Ms. Daonne Caldwell sponsors the cost studies that BellSouth filed on October 2, 2000 in this proceeding. As she explains in detail, these studies are based on forward-looking economic costs, and the same
15 16 17 18	A.	to the Total Element Long Run Incremental Cost ("TELRIC") initially filed by BellSouth. BellSouth's witness Ms. Daonne Caldwell sponsors the cost studies that BellSouth filed on October 2, 2000 in this proceeding. As she explains in detail, these studies are based on forward-looking economic costs, and the same adjustments previously ordered by the Authority have been incorporated into these
15 16 17 18 19	A. Q.	to the Total Element Long Run Incremental Cost ("TELRIC") initially filed by BellSouth. BellSouth's witness Ms. Daonne Caldwell sponsors the cost studies that BellSouth filed on October 2, 2000 in this proceeding. As she explains in detail, these studies are based on forward-looking economic costs, and the same adjustments previously ordered by the Authority have been incorporated into these
15 16 17 18 19 20 21		to the Total Element Long Run Incremental Cost ("TELRIC") initially filed by BellSouth. BellSouth's witness Ms. Daonne Caldwell sponsors the cost studies that BellSouth filed on October 2, 2000 in this proceeding. As she explains in detail, these studies are based on forward-looking economic costs, and the same adjustments previously ordered by the Authority have been incorporated into these studies.
115 116 117 118 119 20 21		to the Total Element Long Run Incremental Cost ("TELRIC") initially filed by BellSouth. BellSouth's witness Ms. Daonne Caldwell sponsors the cost studies that BellSouth filed on October 2, 2000 in this proceeding. As she explains in detail, these studies are based on forward-looking economic costs, and the same adjustments previously ordered by the Authority have been incorporated into these studies.  WHAT RATES (RECURRING AND NON-RECURRING) DOES
15 16 17 18 19 20 21 22 23		to the Total Element Long Run Incremental Cost ("TELRIC") initially filed by BellSouth. BellSouth's witness Ms. Daonne Caldwell sponsors the cost studies that BellSouth filed on October 2, 2000 in this proceeding. As she explains in detail, these studies are based on forward-looking economic costs, and the same adjustments previously ordered by the Authority have been incorporated into these studies.  WHAT RATES (RECURRING AND NON-RECURRING) DOES

1		TELRIC (based on the efficient network requirement) plus, (2) a reasonable
2		allocation of forward-looking common costs. BellSouth, however, continues to
3		maintain that the FCC's pricing rules do not permit full cost recovery. The rates
4		BellSouth proposes are contained in Exhibit JAR-1 attached to my testimony.
5		Exhibit JAR-1 contains BellSouth's proposed rates for the additional UNEs that
6		resulted from the FCC's UNE Remand and Line Sharing Orders. The cost study
7		reference number is provided with the description of the corresponding rate element.
8		
9	Q.	HOW WILL THE PRICES ESTABLISHED IN THIS PROCEEDING AFFECT
10		THE DEVELOPMENT OF LOCAL COMPETITION IN TENNESSEE?
11		
12	A.	The prices established in this proceeding will have profound effects on the continued
13		development of competition in Tennessee. The outcome of this docket will affect:
14		- the nature and extent of competition;
15		- how local competition will continue to develop;
16		- which companies will choose to participate;
17		- which customers will benefit from local competition;
18		- economic development and the availability of advanced
19		technologies.
20		
21		All of these issues will be significantly impacted by the Authority's decision in this
22		proceeding.
23		
24	Q.	PLEASE BRIEFLY COMMENT ON HOW PRICES FOR UNES AND
25		INTERCONNECTION SERVICES AFFECT THE ISSUES IDENTIFIED
		ABOVE.

1		
2	A.	In order to maintain an environment in which efficient competition will occur and
3		provide the maximum benefit to consumers, local competition must be implemented
4		in a fair and balanced manner. If prices for UNEs and interconnection services are
5		set either too high or too low then:
6		- new investment will not materialize and economic development
7		will be thwarted;
8		- market entry and investment decisions of competitors, including
9		BellSouth, will be distorted;
10		- the development of efficient competition in the local market, as
11		intended by Congress, will not prosper, and
12		- such incorrect pricing will not, in the long run, benefit the
13		consumer.
14		
15	Q.	HOW WILL INCENTIVES TO INVEST IN NEW TECHNOLOGY BE
16		AFFECTED BY PRICES THAT ARE NOT JUST AND REASONABLE?
17		
18	A.	Generally, incentives to invest in new technology are reduced if prices for UNEs and
19		interconnection services are not just and reasonable. As explained further below,
20		such incentives to both CLECs and Incumbent Local Exchange Companies
21		("ILECs") are reduced.
22		
23		One consequence of establishing prices that are not just and reasonable is that such
24		pricing causes inefficient decisions. Prices that are understated deter the ILEC from
25		undertaking investments because it guarantees that the costs of those investments will
		not be recovered. An ILEC only has an obligation to unbundle its existing network.

If UNE prices are too low, investment decisions associated with expanding or upgrading that network become more speculative. Accordingly, incentives to expand that network into new areas and upgrade it with new technology are reduced. Where UNEs are available, CLECs will over-consume the ILEC's facilities and under-invest in their own facilities, even when investing in their own facilities is the efficient choice.

Another consequence of inadequate UNE prices is that it results in inefficient entry of CLECs into the local market by placing all of the risks of building and maintaining a network on the ILEC. In effect, the CLECs get a "free ride" on BellSouth's network without having to make any substantial investment or commitment. While CLECs have the option to use the ILEC's facilities for the economic life of those facilities, CLECs don't have to. The CLEC can utilize BellSouth's facilities for a limited period, e.g., until the CLEC builds its own facilities to serve a customer. Since BellSouth established the facilities, however, BellSouth must recover its costs whether a CLEC uses the facilities or not. Any costs not recovered from the CLEC who caused the costs become a burden upon BellSouth's end users. If prices are not set to cover costs, then CLECs don't bring to the marketplace anything more than an arbitrage mechanism. This arbitrage allows them to avoid paying the costs they would otherwise have to pay in a competitive marketplace. End user customers are ultimately the losers in this arrangement.

Q. ARE THERE ANY OTHER ASPECTS TO THIS RATE-SETTING
PROCEEDING OF WHICH THE AUTHORITY SHOULD BE AWARE?

A. Yes. Another troublesome outcome of setting prices too low would be the

marginalization of the ILEC. As discussed later in my testimony, marginalization occurs as a result of price differences between rural residential and urban businesses. The prices of the latter have historically subsidized the high cost of providing service to the former, serving public policy purposes to ensure affordable local service for all consumers. Setting UNE and interconnection services prices at unreasonably low levels will hinder BellSouth's ability to compete because the CLECs will have an artificial pricing advantage over BellSouth. The CLEC will, therefore, be in a better position to "cherry pick" the more profitable, mainly business customers, and the ILEC will lose the low cost, high margin, urban customers to competition. The ILEC will be left to serve the high cost, low (or negative) margin, rural customers. Ultimately, since only the low margin customers will be left to cover the full cost of the network, prices for these predominantly rural customers would have to increase.

Q. PLEASE EXPLAIN FURTHER HOW INADEQUATE UNE PRICES AFFECT RETAIL PRICES.

A.

If the prices of the services provided to competitors do not cover the costs of providing the services, BellSouth's retail customers and shareholders will end up subsidizing its competitors. In that event, BellSouth must attempt to recover certain wholesale costs through its retail prices. Unfortunately, however, attempts to recover the shortfall in this manner will ultimately be unsuccessful and BellSouth will have no choice but to recover the shortfall from its retail customers. The competitor who is using the subsidized facilities will not have to recover this shortfall through its retail prices. Hence, the competitor's prices will remain lower than the incumbent's retail prices. By partially utilizing a subsidy provided by BellSouth's retail customers and shareholders, the competitor can undercut BellSouth's retail prices. To respond

1		to this competitive pressure, BellSouth must lower certain retail prices, and attempt
2		to recover wholesale costs from a smaller group of retail customers. The result is
3		that this subsidy to competitors would ultimately be borne by those end users that
4		have the fewest competitive options, e.g., rural residential customers.
5		
6	Q.	WHAT ARE SOME OF THE CONSEQUENCES IF PRICES ARE SET TOO
7		HIGH?
8		
9	A.	As I mentioned earlier, the FCC's current pricing rules result in prices being
10		understated. Therefore, setting prices too high is not currently a condition the
11		Authority will encounter. Nonetheless, setting prices too high would result in
12		uneconomic decisions such as a CLEC constructing its own facilities (rather than
13		purchasing UNEs from the ILEC) when the CLEC is not the most efficient provider.
14		Of course, the result would be that infrastructure competition would develop sooner,
15		even though the CLEC may not be the most efficient provider.
16		
17		The ultimate goal is to establish prices that are neither too low nor too high; to do
18		otherwise will result in inefficient decisions, and, ultimately, consumers will suffer the
19		consequences. Again, however, given the current pricing rules, the Authority can
20		only minimize the extent to which prices are set too low.
21		
22	Q.	ARE THERE ANY UNIQUE CONCERNS SURROUNDING
23		NONRECURRING PRICES?
24		
25	A.	Yes. While all of the issues previously discussed apply both to recurring and
		nonrecurring prices, the impact of inappropriate nonrecurring prices is felt

1		immediately. Nonrecurring prices principally recover labor cost and direct expenses
2		incurred when a specific element or service is provisioned as the result of a service
3		order. These expenses are paid immediately by the ILEC. Thus, setting
4		nonrecurring prices too low will immediately begin to create the negative
5		consequences that I previously discussed. Consequently, the Authority should be
6		very careful to ensure that nonrecurring prices fully recover the cost that an ILEC is
7		expected to incur on a going-forward basis.
8		
9		In particular, the Authority should ensure that the obligations of the ILEC are
10		accurately reflected in the cost study. For example, BellSouth's nonrecurring costs
11		reflect the work times typically required to perform the various functions required to
12		provision a particular element. Therefore, if the Authority were to establish
13		performance requirements that require additional work activities, BellSouth's cost
14		studies would not accurately reflect its costs.
15		
16		Finally, nonrecurring costs should reflect the activities actually undertaken to provide
17		the element. For example, a new technology that <u>could</u> reduce nonrecurring costs
18		should only be used as a basis for prices to the extent that it will be actually used by
19		BellSouth to provide the element on a going-forward basis.
20		
21	Geogr	raphic Deaveraging
22	Q.	WHAT OBLIGATION DOES THE AUTHORITY HAVE TO ESTABLISH
23		GEOGRAPHICALLY DEAVERAGED RATES FOR UNBUNDLED
24		NETWORK ELEMENTS?
25		

The FCC's Rule 51.507(f) requires state commissions to establish different rates

A.

1 (prices) for elements in at least three cost-related rate zones within the state to reflect 2 geographic cost differences. With the November 2, 1999 release of the FCC's 3 Order in CC Docket No. 96-46, the stay of Rule 51.507(f) was lifted effective May 4 1, 2000. 5 PLEASE DISCUSS THE GENERAL POLICY CONSIDERATIONS 6 Q. 7 ASSOCIATED WITH GEOGRAPHIC DEAVERAGING OF UNES. 8 9 A. UNEs are generally used by CLECs to compete with services offered at retail rates 10 by incumbent local exchange carriers ("ILECs"). Consequently, the relationship between UNE rates and retail rates affects competitive development. Historically, it 11 12 has been the intent and practice of regulators to deaverage rates for basic service in 13 an inverse relationship to costs. For example, for basic residence local exchange 14 service in Tennessee, Rate Group 1 has the lowest rate, and Rate Group 5 has the 15 highest rate. The wire centers in Rate Group 1, however, are generally rural and 16 have much higher costs than the urban wire centers in Rate Group 5. Such pricing 17 practices served both regulatory and public policy purposes and incorporated implicit subsidies to ensure affordable local service for all customers. Conversely, 18 19 UNE prices are based on costs and will be geographically deaveraged in a direct 20 relationship to cost. 21 22 Geographically deaveraging UNE rates will result in a rate structure that is 23 inconsistent with the existing pricing practices for retail rates for basic local exchange 24 service as established by this Authority. The present rate structure in Tennessee

incorporates long-standing policies of purposefully pricing some services markedly

above costs in order to price other services, such as residential basic local exchange

service, at or below cost. Further, basic local exchange service rates have been established with a direct relationship to the number of lines in an exchange's local calling area – the greater the number of lines in a particular exchange's local call area, the higher the price for the basic service. Geographic deaveraging will create loop prices that vary inversely from the prices for retail services.

## Q. WHAT SHOULD THE AUTHORITY DO TO ADDRESS THE PROBLEMS DISCUSSED ABOVE?

A.

The Authority should encourage rate rebalancing and establish a universal service fund as quickly as possible. This is important because unbundled loops will be used by CLECs to compete for these retail customers. Geographically deaveraging loop prices would result in lower UNE loop prices in the urban area where retail prices are currently the highest. In rural areas, the reverse would be true. However, in rural areas, geographically deaveraged unbundled loop prices set high enough to cover costs would be irrelevant because the CLEC could simply resell the low priced retail service to rural customers. As a result, deaveraging, without concomitant rate rebalancing or creation of a state universal service fund, simply creates another opportunity for CLECs to engage in inappropriate arbitrage of the pricing schedule. This arbitrage will ultimately lead to higher prices for rural customers as CLECs usurp the contribution contained in the prices charged in urban areas that currently make lower rural prices possible.

It is very important to recognize that CLECs use unbundled loops to compete with residence and business retail local exchange services. As such, the pricing implications of geographically deaveraging the loop cannot be divorced from the

1		price of local exchange services.
2		
3	Q.	PLEASE EXPLAIN HOW BELLSOUTH DERIVED ITS PROPOSED
4		DEAVERAGED RATES.
5		
6	A.	The geographically deaveraged rates BellSouth proposes were derived using the
7		methodology adopted by the Authority in their decision of April 25, 2000, in Docket
8		No. 97-1262. In using the methodology adopted by the Authority, customers who
9		are located in the same geographic area and who have similar calling areas will be in
10		the same geographically deaveraged zone for UNE pricing. Utilizing local exchange
11		rate groups to define geographically deaveraged zones for UNEs meets the
12		requirements set forth by the FCC and provides consistency between the structure
13		of BellSouth's retail, resale and UNE rates. Further, "rate group-to-zone" mapping
14		best represents the competitive market environment in Tennessee, thereby promoting
15		competition in all areas of Tennessee.
16		
17	Q.	WHAT DOES BELLSOUTH PROPOSE AS ITS GEOGRAPHICALLY
18		DEAVERAGED RATES IN THIS PROCEEDING?
19		
20	A.	The geographically deaveraged rates being proposed by BellSouth are contained in
21		Exhibit JAR-1. Also, when deaveraging the loop/port combination, only the loop
22		component is deaveraged since switching (port) costs do not vary by geographic
23		location.
24		
25	UNE I	Remand Order Requirements

PLEASE BRIEFLY DESCRIBE THE FCC'S UNE REMAND ORDER.

Q.

1		
2	A.	As the result of a Court Remand, the FCC was required to review its previously
3		established national list of UNEs. The FCC was instructed to apply the "Necessary
4		and Impair Standards" of Section 251(d)(2) of the Act to determine which network
5		elements an ILEC must unbundle. The FCC's UNE Remand Order resulted from
6		this further review, and it provided a national list of network elements that ILECs
7		must unbundle and make available at cost-based rates for CLECs. The resulting list
8		is similar, but not identical, to the original UNE list. Generally, loops, subloops,
9		network interface devices (NIDs), circuit switching, interoffice transmission facilities,
10		signaling and call-related databases and operations support systems (OSS) must be
11		unbundled. However, certain network elements contained in the original UNE list no
12		longer must be unbundled. These items are operator services and directory
13		assistance (OS/DA), packet switching (per specified exemption) and circuit
14		switching (per specified exemption).
15		
16	Q.	WHAT IS THE RELEVANCE OF THE FCC'S UNE REMAND ORDER TO
17		THIS PROCEEDING?
18		
19	A.	As previously noted, this Authority is establishing permanent cost-based rates for
20		numerous UNEs in Docket No. 97-01262. Since the FCC has added some UNEs,
21		this Authority must establish permanent cost-based rates for these new UNEs. The
22		permanent cost-based rates that will be established in Docket No. 97-01262 are

25 Q. WERE ANY ADDITIONAL UNBUNDLED LOOP TYPES REQUIRED BY THE FCC'S UNE REMAND ORDER?

unaffected by the UNE Remand Order.

23

A. Yes. While the Authority is preparing to establish rates for numerous types of unbundled loops, the FCC's UNE Remand Order requires BellSouth to provide unbundled copper loops, dark fiber loops and unbundled loops at high capacity speeds such as DS3 and OC3. Because the Authority has not yet addressed prices for these types of loops, BellSouth proposes the rates contained on Exhibit JAR-1.

8 Q.

## WHAT IS THE BASIS FOR THE PRICES BELLSOUTH PROPOSES FOR PROVIDING UNE COMBINATIONS?

A.

Prices for the elements that comprise the UNE combinations that BellSouth makes available to CLECs when such combinations are currently combined will be established by the Authority. Some of the prices will be established by the Authority in Docket No. 97-01262 and some of the prices will be established in this proceeding. Exhibit JAR-2 attached to my testimony contains a chart that identifies the UNEs that are included in various UNE combinations along with the identification of the TRA docket number in which the rate will be established. As I will discuss in greater detail later in my testimony, BellSouth has elected to provide access to new enhanced extended loop ("EEL") combinations when specific circumstances exist so that BellSouth is not required to provide unbundled local switching. As such, BellSouth is proposing in this proceeding nonrecurring cost studies and prices for providing new EEL combinations. BellSouth's nonrecurring cost study for providing new EEL combinations was filed on October 20, 2000. The proposed recurring and nonrecurring prices for the UNE combinations being addressed in this proceeding are contained in Exhibit JAR-1.

1	Q.	PLEASE EXPLAIN WHY BELLSOUTH IS PROPOSING NONRECURRING
2		RATES FOR ADSL AND HDSL LOOPS IN THIS DOCKET WHEN RATES
3		FOR THESE LOOPS WERE ALREADY BEING CONSIDERED IN DOCKET
4		NO. 97-01262?
5		
6	A.	The nonrecurring rates BellSouth proposed in Docket No. 97-01262 for ADSL and
7		HDSL loops were based on a cost structure that only allowed for a manual service
8		inquiry process and assumed that loop makeup information would always be
9		required for xDSL loops. Since BellSouth's filing in Docket No. 97-01262,
10		BellSouth has implemented a mechanized provisioning process associated with its
11		xDSL loop offerings. As such, BellSouth will offer both a manual and a mechanized
12		provisioning process for service inquiry and access to loop makeup information.
13		
14	Q.	PLEASE EXPLAIN HOW RESTRUCTURING THE NONRECURRING
15		COSTS IMPACTS THE RECURRING RATES FOR XDSL LOOPS.
16		
17	A.	Because of the Authority's requirement that nonrecurring costs associated with
18		testing be recovered on a monthly recurring basis, the restructuring of the
19		nonrecurring ADSL and HDSL costs impacts the amount of nonrecurring testing
20		costs. Since the nonrecurring testing costs have decreased, the testing cost to be
21		included in the recurring rates for the ADSL and HDSL loops has also decreased.
22		As such, the proposed recurring rates for ADSL and HDSL loops being considered
23		in Docket No. 97-01262 should be modified to reflect the impact of the restructured
24		nonrecurring cost study.

1	Q.	PLEASE DESCRIBE THE SITUATIONS WHEN CHARGES FOR LINE
2		CONDITIONING, ALSO REFERRED TO AS LOOP MODIFICATION,
3		WOULD APPLY.
4		
5	A.	Unbundled loop modification charges are applicable when a CLEC requests that
6		BellSouth remove equipment that has been placed on copper loops (i.e., load coils,
7		low-pass filters, range extenders, etc.) and/or by removing bridged tap attached to
8		the copper loop. The FCC permits BellSouth to charge CLECs for loop
9		conditioning. The FCC's UNE Remand Order states, "[w]e agree that networks
10		built today normally should not require voice-transmission enhancing devices on
11		loops of 18,000 feet or shorter. Nevertheless, the devices are sometimes present on
12		such loops, and the incumbent LEC may incur costs in removing them. Thus, under
13		our rules, the incumbent should be able to charge for conditioning such loops." [See
14		Paragraph 193, Footnote deleted]
15		
16		Obviously, since the FCC allows the recovery of costs for conditioning loops under
17		18,000 feet, rates for conditioning loops greater than 18,000 feet are also
18		appropriate. A CLEC may use BellSouth's unbundled loop modification offering to
19		remove bridge tap and/or equipment from any copper loop within BellSouth's
20		network for the purposes of providing advanced data services.
21		
22	Q.	WHAT ARE THE APPROPRIATE RATES FOR LOOP MODIFICATION?
23		
24	A.	BellSouth's proposed rates for unbundled loop modification are contained in Exhibit
25		JAR-1. These proposed rates are supported by cost studies sponsored by Ms.
		Caldwell.

1		
2	Q.	PLEASE EXPLAIN WHICH SUBLOOP ELEMENTS BELLSOUTH IS
3		OBLIGATED TO UNBUNDLE.
4		
5	A.	The FCC's UNE Remand Order defines the subloop network element as any
6		portion of the loop that is technically feasible to access at terminals in the ILEC's
7		outside plant, including inside wire. Consistent with this order, BellSouth makes the
8		following subloop elements available to CLECs on an unbundled basis:
9		
10		The Network Interface Device ("NID") provides a single line termination
11		device or that portion of a multiple line termination device required to
12		terminate a single line or circuit. The NID, located on the customer's
13		premises, establishes the official network demarcation point between a
14		telecommunications company and its end user customer. BellSouth provides
15		access to the NID on an unbundled basis; therefore, a CLEC may order a
16		stand alone NID from BellSouth. However, when a CLEC orders an
17		unbundled loop, BellSouth provides the NID also. In all cases where
18		BellSouth provisions a loop, it must be properly grounded.
19		
20		Loop feeder provides a transmission path between the feeder distribution
21		interface and the telephone company central office.
22		
23		Loop distribution or distribution media provides a transmission path
24		between a feeder distribution interface and the NID at the customer's
25		premises. If the CLEC were to take loop distribution as an unbundled

1		element, then the CLEC would presumably provide its own feeder facilities
2		to its own switch.
3		
4		Loop concentration enables CLECs to concentrate up to 96 sub-loops on
5		2 DS1s for the purpose of connecting the sub-loops (at a concentrated level)
6		to BellSouth's feeder system.
7		
8		Inside Wire, as described by the FCC in its UNE Remand Order, includes
9		wire owned and controlled by the ILEC on or near an end user customer
10		premises. Such inside wire would include access to BellSouth's Network
11		Terminating Wire ("NTW") and Intrabuilding Network Cable ("INC").
12		Inside wire on the customer's side of the demarcation point (typically the
13		NID) is owned and controlled by the customer.
14		
15	Q.	HOW SHOULD THE PRICES FOR UNBUNDLED SUBLOOP ELEMENTS
16		BE SET?
17		
18	A.	The prices for unbundled subloop elements should be established using the same
19		cost methodology used for other unbundled network elements. Ms. Caldwell
20		sponsors BellSouth's cost studies for subloop elements. Prices for the subloop
21		elements that BellSouth makes available to CLECs on an unbundled basis are
22		contained in Exhibit JAR-1 attached to my testimony.
23		
24	Q.	IN ITS UNE REMAND ORDER, DID THE FCC MODIFY ITS DEFINITION
25		OF THE NID?

A. Yes. Initially, in its First Report and Order in CC Docket No. 96-98 issued August 8, 1996 ("Local Competition Order"), the FCC defined the NID network element as a cross-connect device used to connect loop facilities to inside wiring. In its UNE Remand Order at ¶ 233, the FCC modified its original definition of the NID to "include all features, functions, and capabilities of the facilities used to connect the loop distribution plant to the customer premises wiring, regardless of the particular design of the NID mechanism." The FCC's stated goal was to have the NID definition "be flexible and technology neutral." (Id. ¶ 234) The FCC noted that its "rules permit considerable variation in the interconnection facilities between carrier and customer-controlled facilities," and that "evolution in network design and technology will likely cause additional design variations among the hardware interfaces between carrier and customer premises facilities." (Id.) Therefore, in its NID definition, the FCC's use of the terms "features, functions and capabilities" means that, regardless of the type of device used to connect the loop distribution plant to the customer premises wiring, competitors will be able to obtain access to any such facilities as an unbundled network element. Indeed, the FCC stated that its "intention is to ensure that the NID definition will apply to new technologies, as well as current technologies, and to ensure that competitors will continue to be able to access customer premises facilities as an unbundled network element, as long as that access is required pursuant to section 251(d)(2) standards." (Id.)The FCC also specified that its definition of the NID includes any means of interconnection of customer premises wiring to the incumbent LEC's distribution plant, such as a cross-connect device used for that purpose. However, the FCC

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1		specifically declined to include inside wiring in the definition of the NID, or to include
2		the NID as part of any other subloop element.
3		
4	Q.	DOES THE FCC'S CURRENT DEFINITION OF THE NID HAVE ANY
5		AFFECT ON THE PRICES THE AUTHORITY IS CURRENTLY
6		CONSIDERING FOR THE NID?
7		
8	A.	No, it does not. The costs the Authority is considering for the NID are equal to the
9		forward looking economic cost as developed using the Authority's cost study
10		adjustments. The only additional element required by the FCC in its UNE Remand
11		Order is a NID cross-connect, and BellSouth's proposed rate for this element is
12		found on Exhibit JAR-1.
13		
14	Q.	HOW IS THE FCC'S DEFINITION OF INSIDE WIRE IN ITS UNE REMAND
15		ORDER DIFFERENT FROM THE GENERALLY ACCEPTED MEANING OF
16		INSIDE WIRE?
17		
18	A.	Since it was deregulated, inside wire has been defined as wire on the customer's side
19		of the demarcation point. Consequently, inside wire is considered to be owned and
20		controlled by the customer. In its UNE Remand Order, however, the FCC used the
21		term "inside wire" when discussing access to BellSouth's Unbundled Network
22		Terminating Wire ("UNTW") and Unbundled Intrabuilding Network Cable
23		("UINC"). Inside Wire, as described by the FCC in its UNE Remand Order,
24		includes wire owned and controlled by the ILEC on or near an end user customer
25		premises. Although BellSouth does not agree that the term "inside wire"
		appropriately encompasses UNTW and UINC, BellSouth does agree that UNTW

1		and UINC are subloop elements, which CLECs are entitled to purchase on an
2		unbundled basis, and for which BellSouth should be compensated.
3		
4	Q.	DOES BELLSOUTH'S PETITION FOR RECONSIDERATION ON THE
5		DEFINITION OF INSIDE WIRE AFFECT THE RATES PROPOSED IN THIS
6		PROCEEDING?
7		
8	A.	No. On February 17, 2000 BellSouth petitioned the FCC to reconsider its
9		definition of inside wire adopted in the UNE Remand Order. Specifically, BellSouth
10		has requested the FCC to continue to use its historic definition of inside wire and not
11		expand its definition to include UNTW and UINC. Regardless of the outcome of
12		BellSouth's Petition, UNTW and UINC would remain subloop elements, and the
13		rates BellSouth proposes in this proceeding for UNTW and UINC comply with the
14		FCC's rules.
15		
16	Q.	PLEASE EXPLAIN HOW THE PROVISION OF UNBUNDLED LOCAL
17		SWITCHING IS AFFECTED BY THE FCC'S UNE REMAND ORDER.
18		
19	A.	BellSouth, like other incumbents, is required to unbundle local loops and local
20		switching in certain instances so that CLECs can purchase these elements for use in
21		their networks. However, in its UNE Remand Order the FCC determined that, in
22		certain geographic areas, and under specific circumstances, the incumbent LEC can
23		elect not to provide unbundled switching. The geographic area that is involved is
24		what is referred to as Density Zone 1 in a top 50 Metropolitan Statistical Area
25		("MSA"). The specific circumstances involve two considerations. First, the
		incumbent LEC has to agree to provide, at TELRIC-based rates, enhanced

1		extended links ("EELs") in this geographic area to CLECs that serve end users with
2		four or more lines. The EEL is a specific combination of loop and transport UNEs.
3		What this means is that the ILEC will combine a UNE loop and UNE transport to
4		assist the CLEC in getting to the switch that the CLEC will use to provide local
5		switching. Second, the incumbent is only relieved of the obligation to provide local
6		switching for customers of the CLEC who have four or more lines.
7		
8		The FCC's logic here is that the biggest part of the consumer market involves
9		customers who have three or fewer lines. By the time a customer has four or more
10		lines, the customer is either a mid-sized or a large customer, and CLECs are not
11		impaired without access to BellSouth's unbundled switching to address the
12		telecommunications needs of these classes of customers.
13		
14	Q.	WHY DOES THE INCUMBENT LEC HAVE TO PROVIDE ACCESS TO
15		EELS IN ORDER TO TAKE ADVANTAGE OF THIS EXEMPTION?
16		
17	A.	Basically, the thought is that, if the incumbent LEC is willing to provide an EEL, the
18		CLEC can haul the call anywhere in the area to a switch. The FCC obviously
19		concluded that, at least in the top 50 MSAs, switching is available from any number
20		of sources. As long as the incumbent LEC allows the CLEC to have an EEL so that
21		the end user could be connected to a switch, it is not necessary for the incumbent
22		LEC to unbundle local switching.
23		
24		The FCC's Rule 51.319(c)(2) is quite clear. It simply states that if the incumbent
25		LEC provides nondiscriminatory access to the EEL in Density Zone 1 in a top 50
		MSA, then the incumbent LEC is not required to unbundle local circuit switching in

1		that area for end users having four or more lines. In adopting this position in its UNI
2		Remand Order at ¶ 293, the FCC found that a rule that provides access to
3		unbundled local circuit switching to requesting carriers when they serve customers
4		with three lines or fewer captures a significant portion of the mass market. The FCC
5		rejected the CLECs' contrary arguments.
6		
7	Q.	DOES THE FCC'S UNE REMAND ORDER IMPACT THE RATES THIS
8		AUTHORITY INTENDS TO ESTABLISH FOR LOCAL SWITCHING?
9		
10	A.	No, it does not. The rates the Authority intends to establish in Docket No. 97-
11		01262 do not impact those situations where BellSouth is required to provide CLEC
12		with access to unbundled local switching. When BellSouth elects to take advantage
13		of the switching exemption I just discussed, BellSouth will offer CLECs access to
14		new EELs for qualifying customers at the sum of the recurring rates for the elements
15		that comprise an EEL as established in Docket No. 97-01262. The nonrecurring
16		prices for BellSouth to provide these new EEL combinations are contained on
17		Exhibit JAR-1 and are supported by the cost studies BellSouth filed on October 20,
18		2000.
19		
20	Q.	DOES THE FCC'S UNE REMAND ORDER HAVE ANY EFFECT ON THE
21		UNBUNDLING OF VERTICAL FEATURES?
22		
23	A.	No. Nothing in the UNE Remand Order modified any previous FCC decisions or
24		other rulings concerning the unbundling of vertical features. The Authority intends to
25		establish rates for unbundled vertical features in Docket No. 97-01262.

1	Q.	DID THE FCC'S UNE REMAND ORDER IDENTIFY ADDITIONAL
2		UNBUNDLING REQUIREMENTS FOR INTEROFFICE TRANSMISSION
3		FACILITIES?
4		
5	A.	The FCC's UNE Remand Order determined that high capacity interoffice
6		transmission facilities should be provided on an unbundled basis. Further, the Order
7		required that ILECs provide unbundled access to dark fiber. In order to comply
8		with those requirements, BellSouth is proposing rates for unbundled interoffice
9		transport at levels such as DS3, OC3 and OC48, and is also proposing rates for
10		unbundled dark fiber. Please see Exhibit JAR-1 for BellSouth's proposed rates that
11		are supported by cost studies sponsored by Ms. Caldwell.
12		
13	Q.	PLEASE DESCRIBE BELLSOUTH'S OBLIGATIONS RELATIVE TO
14		PROVIDING CLECS WITH ACCESS TO BELLSOUTH'S SIGNALING
15		NETWORKS AND CALL-RELATED DATABASES.
16		
17	A.	The FCC's Rule 51.319 requires BellSouth to provide nondiscriminatory access to
18		signaling networks and call-related databases. When a CLEC purchases unbundled
19		switching, BellSouth provides access to its signaling network from that switch in the
20		same manner in which BellSouth obtains such access itself. When a CLEC provides
21		its own switching facilities, BellSouth also provides access to its signaling network for
22		each of the CLEC's switches in the same manner as BellSouth connects one of its
23		own switches. For query and call-related database response, BellSouth provides
24		access to its call-related databases.
25		

1	Q.	WHAT ARE THE RATES BELLSOUTH PROPOSES FOR ACCESS TO ITS
2		SIGNALING NETWORK AND CALL-RELATED DATABASES?
3		
4	A.	BellSouth proposes the rates contained in Exhibit JAR-1, attached to my testimony,
5		for access to BellSouth's signaling network and the following call-related databases:
6		<ul> <li>BellSouth Calling Name Database Service (CNAM)</li> </ul>
7		<ul> <li>BellSouth Access to E911 Service</li> </ul>
8		<ul> <li>Local Number Portability (LNP) Query Service</li> </ul>
9		
10	Q.	WHAT DOES THE FCC'S UNE REMAND ORDER SAY ABOUT
11		OPERATIONS SUPPORT SYSTEMS ("OSS")?
12		
13	A.	Basically, in its UNE Remand Order, the FCC reaffirmed that incumbent LECs must
14		provide access to OSS functions on an unbundled basis to requesting carriers. As
15		Mr. Pate discusses in his testimony, BellSouth provides such access. The UNE
16		Remand Order does not impact the existing CLEC OSS interfaces or require any
17		modifications to these interfaces. The UNE Remand Order does not impact the
18		rates that CLECs will pay for access to the OSS functions that the Authority intends
19		to establish in Docket No. 97-01262. The FCC clarified in its UNE Remand Order
20		that its definition of OSS includes access to loop qualification information. As a
21		result, the Authority must establish rates for CLECs to access this information in this
22		proceeding
23		
24	Q.	WHAT IS LOOP MAKE-UP INFORMATION?
25		

1	A.	As defined in the FCC's UNE Remand Order, loop make-up information (also
2		referred to as loop qualification information) identifies the physical attributes of the
3		loop plant (such as loop length, the presence of analog load coils and bridge taps,
4		and the presence and type of Digital Loop Carrier), which then enables carriers to
5		determine whether the loop is capable of supporting xDSL and other advanced
6		technologies. BellSouth witness Mr. Ron Pate describes the processes BellSouth
7		makes available to CLECs for access to such loop make-up information.
8		
9	Q.	WHAT RATES DOES BELLSOUTH PROPOSE TO COVER THE COST OF
10		PROVIDING ACCESS TO LOOP MAKE-UP INFORMATION?
11		
12	A.	On Exhibit JAR-1, BellSouth proposes rates for two elements – access to the loop
13		make-up database (Cost Ref. No. J.3.1 - Mechanized Loop Make-up) and a
14		service inquiry with loop make-up (Cost Ref. Nos. J.3.3 and J.3.4 - Manual Loop
15		Make-up with or without Facility Reservation Number). The proposed rates are
16		based on BellSouth's cost studies as sponsored by Ms. Caldwell.
17		
18	Q.	IS BELLSOUTH REQUIRED TO PROVIDE ACCESS TO PACKET
19		SWITCHING UNEs?
20		
21	A.	No. With regard to the obligation to unbundle packet switching, the FCC stated in
22		its Third Report and Order:
23		We decline at this time to unbundle the packet switching functionality, except
24		in limited circumstances. Among other potential factors, we recognize that
25		the presence of multiple requesting carriers providing service with their own
		packet switches is probative of whether they are impaired without access to

1			unbundled packet switching. The record demonstrates that competitors are
2			actively deploying facilities used to provide advanced services to serve
3			certain segments of the market – namely, medium and large business – and
4			hence they cannot be said to be impaired in their ability to offer service, at
5			least to these segments without access to the incumbent's facilities. (Order at
6			¶ 306)
7			
8	Q.	WHA	T ARE THE "LIMITED CIRCUMSTANCES" REFERRED TO BY THE
9		FCC?	
10			
11	A.	The Fo	CC's Rule 51.319(c)(3)(B) regarding packet switching requires that an ILEC
12		provid	e unbundled packet switching only where each of the following conditions are
13		satisfie	ed:
14		(i)	The incumbent LEC has deployed digital loop carrier systems, including but
15			not limited to, integrated digital loop carrier or universal digital loop carrier
16			systems; or has deployed any other system in which fiber optic facilities
17			replace copper facilities in the distribution section (e.g., end office to remote
18			terminal, pedestal or environmentally controlled vault);
19		(ii)	There are no spare copper loops capable of supporting the xDSL services
20			the requesting carrier seeks to offer;
21		(iii)	The incumbent LEC has not permitted a requesting carrier to deploy a
22			Digital Subscriber Line Access Multiplexer at the remote terminal, pedestal
23			or environmentally controlled vault or other interconnection point, nor has the
24			requesting carrier obtained a virtual collocation arrangement at these subloop
25			interconnection points as defined under § 51.319(b); and
		(iv)	The incumbent LEC has deployed packet switching capability for its own

1		use.
2		
3	Q.	DOES BELLSOUTH OFFER THE DSLAM AS A UNE? ?
4		
5	A.	No. At paragraph 304 of its Third Report and Order, the FCC defines a DSLAM
6		as a component of packet switching. BellSouth knows of no instance in which all of
7		the conditions required by the FCC, stated above, will be satisfied. Therefore,
8		BellSouth is not required to offer packet switching components; e.g., DSLAMs, on
9		an unbundled basis.
10		
11	Q.	IS BELLSOUTH OBLIGATED TO PROVIDE CLECS WITH ACCESS TO
12		OPERATOR SERVICES AND DIRECTORY ASSISTANCE ("OS/DA") AS
13		UNES?
14		
15	A.	No. The FCC's UNE Remand Order found that CLECs are not impaired without
16		access to BellSouth's OS/DA as UNEs so long as BellSouth provides customized
17		routing (also referred to as selective routing). BellSouth offers selective routing;
18		therefore, certain elements on the BellSouth Tennessee Rate Sheet that BellSouth
19		submitted to the Authority on June 9, 2000 in Docket No. 97-01262 should be
20		removed (specifically, all elements shown under Cost Reference Nos. G.1 through
21		G.8).
22		
23	Q.	WHAT RATES DOES BELLSOUTH PROPOSE FOR SELECTIVE
24		ROUTING?
25		

1	A.	BellSouth offers CLECs two methods for selective routing: selective routing using
2		line class codes, or selective routing utilizing BellSouth's Advanced Intelligent
3		Network ("AIN") solution. Mr. Milner's testimony describes BellSouth's selective
4		routing offerings. BellSouth's proposed rates for selective routing using line class
5		codes are being considered in Docket No. 97-01262. BellSouth's proposed rates
6		for selective routing using BellSouth's AIN solution are contained in Exhibit JAR-1.
7		The proposed rates for BellSouth's AIN solution for selective routing are based on
8		BellSouth's cost studies as sponsored by Ms. Caldwell.
9		
0	Q.	PLEASE EXPLAIN "LINE SHARING" AND "SPECTRUM MANAGEMENT.
11		
12	A.	The local loop from the central office to the customer's premises can be used to
13		provide both voice and packet data service. There are a number of carriers who
14		want to use that loop to provide packet data service while the ILEC would continue
15		to provide voice service. Inserting specific equipment on the line enables the
16		spectrum to be "shared" by the voice provider and the data provider, a functionality
7		also known as "line sharing." In its Line Sharing Order, the FCC specifically states
8		"[t]he provision of xDSL-based service by a competitive LEC and voiceband
19		service by an incumbent LEC on the same loop is frequently called 'line sharing.'"
20		(Line Sharing Order at ¶ 4)
21		
22	Q.	UNDER WHAT CONDITIONS IS AN ILEC SUCH AS BELLSOUTH
23		OBLIGATED TO PROVIDE LINE SHARING?
24		
25	A.	ILECs are only obligated to provide line sharing to a single requesting carrier at the
		same customer address as the traditional POTS analog voice service provided by

1 the incumbent. Line sharing as ordered by the FCC is available under the following conditions: 2 Two carriers – one voice provider (ILEC) and one data provider 3 (CLEC) – serve one customer per loop (Id. ¶ 74); 4 5 The ILEC provides traditional POTS analog voiceband service to the customer on the line to be shared (Id. ¶ 19); 6 7 The CLEC provides xDSL-based service to the customer (Id. ¶ 13); 8 The CLEC's xDSL technologies do not use the frequencies immediately above the voiceband, thereby preserving them as a "buffer" zone to 9 ensure the integrity of the voiceband traffic (Id. fn 136); 10 The CLEC's xDSL technology does not interfere with analog voiceband 11 transmission (Id. ¶ 70-71); and 12 If the ILEC's retail customer disconnects his/her POTs service, the data 13 14 provider must purchase the entire stand-alone loop if it wishes to 15 continue providing xDSL service to the customer. Similarly, ILECs are not required to provide line sharing to a requesting carrier when the 16 CLEC purchases a combination of network elements known as the 17 18 UNE platform. (Id. ¶¶ 72-73) The "platform" referred to in the preceding reference is the loop/port combination. 19 20 When a CLEC purchases the loop/port combination, the CLEC becomes the voice 21 service provider. In order for BellSouth to provide access to the high frequency 22 portion of the loop when the CLEC has purchased the loop/port combination, 23 BellSouth would have to physically separate the loop/port combination, add in a 24 splitter, and then recombine. BellSouth is not required to perform these functions for 25 CLECs.

ı		rutuler, the FCC's Line Sharing Order specifically concluded in paragraph 72 that
2		incumbent LECs must make available to competitive carriers only the high frequency
3		portion of the loop network element on loops on which the incumbent LEC is also
4		providing analog voice service." (emphasis added) In that same paragraph, the
5		FCC stated that "incumbent carriers are not required to provide line sharing to
6		requesting carriers that are purchasing a combination of network elements known as
7		the platform. In that circumstance, the incumbent no longer is the voice provider to
8		the customer." The platform referred to is the loop/port combination. Also, the
9		FCC's Line Sharing Order thoroughly examined whether CLECs would be impaired
0		without access to line sharing when the ILEC is not providing the voice service. The
11		FCC determined that no such impairment exists.
12		
13		Finally, the FCC reiterated its position in its Order dated June 30, 2000 in CC
14		Docket No. 00-65 (SBC – Texas Section 271 Application). At paragraph 324 the
15		Order states, "the obligation of an incumbent LEC to make the high frequency
16		portion of the loop separately available is limited to those instances in which the
17		incumbent LEC is providing, and continues to provide, voice service on the
8		particular loop to which the requesting carrier seeks access."
19		
20	Q.	WHAT ARE THE RATES BELLSOUTH PROPOSES FOR LINE SHARING?
21		
22	A.	BellSouth's proposed rates for line sharing, including rates for CLEC owned
23		splitters, are contained in Exhibit JAR-1. The proposed rates are supported by cost
24		studies sponsored by Ms. Caldwell.
25		

2 A. Yes. #231084

	Unbundled Network Element	Zone	Recurring	Nonrec	urring	Disconnect	
Cost Ref. No.				First	Additional	First	Additional
A.0	UNBUNDLED LOCAL LOOP						
A.2	SUB-LOOP						
A.2.11	Sub-Loop Distribution Per 4-Wire Analog Voice Grade Loop	1	\$7.30	\$147.93	\$75.11	\$99.96	\$16.98
		2	\$9.54	\$147.93	\$75.11	\$99.96	\$16.98
		3	\$12.47	\$147.93	\$75.11	\$99.96	\$16.98
A.2.13	Network Interface Device Cross Connect			\$11.11	\$11.11		
A.2.14	2-Wire Intrabuilding Network Cable (INC)		\$1.47	\$107.63	\$34.81	\$94.41	\$13.09
A.2.15	4-Wire Intrabuilding Network Cable (INC)		\$2.55	\$119.40	\$46.58	\$99.96	\$16.98
A.2.17	Sub-Loop - Per Cross Box Location - CLEC Feeder Facility Set-Up			\$517.25			
A.2.18	Sub-Loop - Per Cross Box Location - Per 25 Pair Panel Set-Up			\$42.68			
A.2.19	Sub-Loop - Per Building Equipment Room - CLEC Feeder Facility Set-Up			\$358.04			
A.2.20	Sub-Loop - Per Building Equipment Room - Per 25 Pair Panel Set-Up			\$105.13			
A.2.21	Sub-Loop - Per Cross Box Location - CLEC Distribution Facility Set-Up			\$517.25			
A.2.24	Sub-Loop - Per 4-Wire Analog Voice Grade Loop / Feeder Only	1	\$21.52	\$137.31	\$61.93	\$118.04	\$30.13
		2	\$28.11	\$137.31	\$61.93	\$118.04	\$30.13
		3	\$36.76	\$137.31	\$61.93	\$118.04	\$30.13
A.2.25	Sub-Loop - Per 2-Wire ISDN Digital Grade Loop / Feeder Only	1	\$16.11	\$142.83	\$67.45	\$104.67	\$18.53
		2	\$21.04	\$142.83	\$67.45	\$104.67	\$18.53
		3	\$27.51	\$142.83	\$67.45	\$104.67	\$18.53
A.2.29	Sub-Loop - Per 4-Wire 56 or 64 Kbps Digital Grade Loop / Feeder Only	1	\$26.06	\$116.00	\$40.62	\$106.82	\$18.91
		2	\$34.03	\$116.00	\$40.62	\$106.82	\$18.91
		3	\$44.50	\$116.00	\$40.62	\$106.82	\$18.91
A.2.30	Sub-Loop - Per 2-Wire Copper Loop / Feeder Only	1	\$9.52	\$114.27	\$38.89	\$104.67	\$18.53
		2	\$12.43	\$114.27	\$38.89	\$104.67	\$18.53
		3	\$16.26	\$114.27	\$38.89	\$104.67	\$18.53
A.2.32	Sub-Loop - Per 4-Wire Copper Loop / Feeder Only	1	\$14.37	\$123.41	\$48.03	\$110.44	\$22.53
		2	\$18.76	\$123.41	\$48.03	\$110.44	\$22.53
		3	\$24.53	\$123.41	\$48.03	\$110.44	\$22.53
A.2.40	Sub-Loop - Per 2-Wire Copper Loop / Distribution Only	1	\$5.16	\$110.71	\$37.89	\$94.41	\$13.09
	1 2 2 2 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2	\$6.74	\$110.71	\$37.89	\$94.41	\$13.09
		3	\$8.81	\$110.71	\$37.89	\$94.41	\$13.09

Unbundled Network Element				urring	Disconnect	
Official Network Element	Zone	Recurring	First	Additional	First	Additional
Sub-Loop - Per 4-Wire Copper Loop / Distribution Only	1	\$6.52	\$117.12	\$44.30	\$99.96	\$16.98
	2		\$117.12	7		\$16.98
	3		\$117.12			\$16.98
Network Interface Device (NID) - 2 line			\$89.69		\$0.6391	\$0.639
Network Interface Device (NID) - 6 line			\$129.65	\$94.51	\$0.6522	\$0.6522
LOOP CHANNELIZATION AND CO INTERFACE (INSIDE CO)						
		\$500.18	\$613.60			
		\$54.82				
						\$8.4
						\$9.6
						\$9.6
						\$9.6
		7				\$9.6
						\$9.6
Unbundled Loop Concentration - Digital 19, 56, 64 Kbps Data		\$11.03	\$8.69	\$8.65	\$9.71	\$9.6
2-WIRE ISDN DIGITAL GRADE LOOP						
Universal Digital Channel	1	\$21.15	\$228.92	\$152.42	\$110.01	\$21.6
	2	\$27.62	\$228.92	\$152.42	\$110.01	\$21.6
	3	\$36.12	\$228.92	\$152.42	\$110.01	\$21.6
2-WIRE ASYMMETRICAL DIGITAL SUBSCRIBER LINE (ADSL) COMPATIBLE LOOP						
2-Wire Asymmetrical Digital Subscriber Line (ADSL) Compatible Loop			\$108 <b>5</b> 0	¢88 13	¢111 76	\$20.8
			ψ190.59	ψ00.13	ψ111.70	Ψ20.0
(Nonrecurring without Loop Makeup)			\$123.38	\$54.30	\$94.14	\$15.3
2-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL)						
COMPATIBLE LOOP						
(Nonrecurring with Loop Makeup)			\$201.24	\$88.80	\$111.76	\$20.8
2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop  (Nonrecurring without Loop Makeup)			\$123,38	\$54.30	\$94.14	\$15.3
	LOOP CHANNELIZATION AND CO INTERFACE (INSIDE CO) Unbundled Loop Concentration - System A (TR008) Unbundled Loop Concentration - System B (TR008) Unbundled Loop Concentration - System A (TR303) Unbundled Loop Concentration - System B (TR303) Unbundled Loop Concentration - DS1 Line Interface Card Unbundled Loop Concentration - POTS Card Unbundled Loop Concentration - FOTS Card Unbundled Loop Concentration - Spots Card Unbundled Loop Concentration - Spots Card Unbundled Loop Concentration - TEST CIRCUIT Card Unbundled Loop Concentration - TEST CIRCUIT Card Unbundled Loop Concentration - Digital 19, 56, 64 Kbps Data  2-WIRE ISDN DIGITAL GRADE LOOP Universal Digital Channel  2-WIRE ASYMMETRICAL DIGITAL SUBSCRIBER LINE (ADSL) COMPATIBLE LOOP 2-Wire Asymmetrical Digital Subscriber Line (ADSL) Compatible Loop (Nonrecurring with Loop Makeup) 2-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL) COMPATIBLE LOOP 2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop (Nonrecurring with Loop Makeup)	Network Interface Device (NID) - 2 line  Network Interface Device (NID) - 6 line  LOOP CHANNELIZATION AND CO INTERFACE (INSIDE CO)  Unbundled Loop Concentration - System A (TR008)  Unbundled Loop Concentration - System B (TR008)  Unbundled Loop Concentration - System B (TR303)  Unbundled Loop Concentration - System B (TR303)  Unbundled Loop Concentration - DS1 Line Interface Card  Unbundled Loop Concentration - POTS Card  Unbundled Loop Concentration - ISDN (Brite Card)  Unbundled Loop Concentration - SPOTS Card  Unbundled Loop Concentration - SPOTS Card  Unbundled Loop Concentration - TEST CIRCUIT Card  Unbundled Loop Concentration - TEST CIRCUIT Card  Unbundled Loop Concentration - Digital 19, 56, 64 Kbps Data  2-WIRE ISDN DIGITAL GRADE LOOP  Universal Digital Channel  1  2  2-WIRE ASYMMETRICAL DIGITAL SUBSCRIBER LINE (ADSL)  COMPATIBLE LOOP  2-Wire Asymmetrical Digital Subscriber Line (ADSL) Compatible Loop  (Nonrecurring with Loop Makeup)  2-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL)  COMPATIBLE LOOP  2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop  (Nonrecurring with Loop Makeup)  2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop  (Nonrecurring with Loop Makeup)  2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop	Network Interface Device (NID) - 2 line  Network Interface Device (NID) - 6 line  LOOP CHANNELIZATION AND CO INTERFACE (INSIDE CO)  Unbundled Loop Concentration - System A (TR008)  Unbundled Loop Concentration - System B (TR008)  Unbundled Loop Concentration - System B (TR008)  Unbundled Loop Concentration - System B (TR303)  Unbundled Loop Concentration - System B (TR303)  Unbundled Loop Concentration - System B (TR303)  Unbundled Loop Concentration - POTS Card  Unbundled Loop Concentration - POTS Card  Unbundled Loop Concentration - ISDN (Brite Card)  Unbundled Loop Concentration - SPOTS Card  Unbundled Loop Concentration - SPOTS Card  Unbundled Loop Concentration - SPOTS Card  Unbundled Loop Concentration - Specials Card  Unbundled Loop Concentration - Digital 19, 56, 64 Kbps Data  2-WIRE ISDN DIGITAL GRADE LOOP  Universal Digital Channel  1 \$21.15  2 \$27.62  3 \$36.12  2-WIRE ASYMMETRICAL DIGITAL SUBSCRIBER LINE (ADSL)  COMPATIBLE LOOP  2-Wire Asymmetrical Digital Subscriber Line (ADSL) Compatible Loop  (Nonrecurring with Loop Makeup)  2-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL)  COMPATIBLE LOOP  2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop  (Nonrecurring with Loop Makeup)  2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop  (Nonrecurring with Loop Makeup)  2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop  (Nonrecurring with Loop Makeup)  2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop  (Nonrecurring with Loop Makeup)	2	2   \$8.52   \$117.12   \$44.30	2   \$8.52   \$117.12   \$44.30   \$99.96

				Nonrec	urring	Disconnect	
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional
	4-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL)						
A.8	COMPATIBLE LOOP						
	4-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop						
A.8.5	(Nonrecurring with Loop Makeup)			\$214.20	\$101.76	\$117.67	\$24.85
	4-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop				<b>.</b>		
A.8.6	(Nonrecurring without Loop Makeup)			\$136.35	\$67.27	\$99.69	\$19.29
A.9	4-WIRE DS1 DIGITAL LOOP						
A.9.21	Sub-Loop Feeder Per 4-Wire DS1 Digital Loop	1	39.74	\$116.00	\$40.62	\$106.82	\$18.91
	, , , , , , , , , , , , , , , , , , ,	2	51.90	\$116.00	\$40.62	\$106.82	\$18.91
		3	67.86	\$116.00	\$40.62	\$106.82	\$18.91
	CONCENTRATION PER SYSTEM PER FEATURE ACTIVATED (OUTSIDE						
A.12	CENTRAL OFFICE)						
A.12.1	Unbundled Loop Concentration - System A (TR008)		\$554.30	\$384.75	\$209.58	\$229.31	\$72.71
A.12.2	Unbundled Loop Concentration - System B (TR008)		\$79.61	\$384.75	\$209.58	\$229.31	\$72.71
A.12.3	Unbundled Loop Concentration - System A (TR303)		\$590.18	\$384.75	\$209.58	\$229.31	\$72.71
A.12.4	Unbundled Loop Concentration - System B (TR303)		\$115.49	\$384.75	\$209.58	\$229.31	\$72.71
A.12.5	Unbundled Sub-loop Concentration - USLC Feeder Interface		\$60.89	\$116.00	\$40.62	\$106.82	\$18.91
A.12.6	Unbundled Loop Concentration - POTS Card		\$2.43	\$8.69	\$8.65	\$9.71	\$9.65
A.12.7	Unbundled Loop Concentration - ISDN (Brite Card)		\$8.93	\$8.69	\$8.65	\$9.71	\$9.65
A.12.8	Unbundled Loop Concentration - SPOTS Card		\$13.14	\$8.69	\$8.65	\$9.71	\$9.65
A.12.9	Unbundled Loop Concentration - Specials Card		\$7.94	\$8.69	\$8.65	\$9.71	\$9.65
A.12.10	Unbundled Loop Concentration - TEST CIRCUIT Card		\$37.78	\$8.69	\$8.65	\$9.71	\$9.65
A.12.11	Unbundled Loop Concentration - Digital 19, 56, 64 Kbps Data		\$11.64	\$8.69	\$8.65	\$9.71	\$9.65
A.13	2-WIRE COPPER LOOP						
A.13.1	2-Wire Copper Loop - short (Nonrecurring with Loop Makeup)	1	\$13.21	\$199.70	\$87.26	\$111.76	\$20.81
	l	2	\$17.25	\$199.70	\$87.26	\$111.76	\$20.81
		3	\$22.56	\$199.70	\$87.26	\$111.76	\$20.81
A.13.1	2-Wire Copper Loop - short (Nonrecurring without Loop Makeup)	1	\$13.21	\$121.84	\$52.77	\$94.14	\$15.36
A.13.1	2-Wire Copper Loop - Short (Nonrecurring without Loop Makeup)	2	\$17.25	\$121.84	\$52.77 \$52.77	\$94.14 \$94.14	\$15.36
		3	\$22.56	\$121.84	\$52.77 \$52.77	\$94.14	\$15.36
				·	·	·	
A.13.7	2-Wire Copper Loop - long (Nonrecurring with Loop Makeup)	1	\$42.00	\$187.34	\$74.90	\$111.76	\$20.81
		2	\$54.85	\$187.34	\$74.90	\$111.76	\$20.81
		3	\$71.72	\$187.34	\$74.90	\$111.76	\$20.81
A.13.7	2-Wire Copper Loop - long (Nonrecurring without Loop Makeup)	1	\$42.00	\$109.48	\$40.41	\$94.14	\$15.36
		2	\$54.85	\$109.48	\$40.41	\$94.14	\$15.36
		3	\$71.72	\$109.48	\$40.41	\$94.14	\$15.36
	1						

		_		Nonrec	urring	Disconnect	
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional
A.14	4-WIRE COPPER LOOP						
A.14.1	4-Wire Copper Loop - short (Nonrecurring with Loop Makeup)	1	\$18.18	\$212.67	\$100.22	\$117.67	\$24.85
		2	\$23.74	\$212.67	\$100.22	\$117.67	\$24.85
		3	\$31.05	\$212.67	\$100.22	\$117.67	\$24.85
A.14.1	4-Wire Copper Loop - short (Nonrecurring without Loop Makeup)	1	\$18.18	\$134.81	\$65.73	\$99.69	\$19.29
		2	\$23.74	\$134.81	\$65.73	\$99.69	\$19.29
		3	\$31.05	\$134.81	\$65.73	\$99.69	\$19.29
A.14.7	4-Wire Copper Loop - long (Nonrecurring with Loop Makeup)	1	\$56.62	\$200.31	\$87.86	\$117.67	\$24.85
		2	\$73.94	\$200.31	\$87.86	\$117.67	\$24.85
		3	\$96.69	\$200.31	\$87.86	\$117.67	\$24.85
A.14.7	4-Wire Copper Loop - long (Nonrecurring without Loop Makeup)	1	\$56.62	\$122.45	\$53.37	\$99.69	\$19.29
	3	2	\$73.94	\$122.45	\$53.37	\$99.69	\$19.29
		3	\$96.69	\$122.45	\$53.37	\$99.69	\$19.29
A.15	UNBUNDLED NETWORK TERMINATING WIRE (NTW)						
A.15.1	Unbundled Network Terminating Wire (NTW) per Pair		\$0.3878	\$59.77		\$0.5814	
A.16	HIGH CAPACITY UNBUNDLED LOCAL LOOP						
A.16.1	High Capacity Unbundled Local Loop - DS3 - Facility Termination		\$374.24	\$595.37	\$304.50	\$234.83	\$170.16
A.16.2	High Capacity Unbundled Local Loop - DS3 - Pacinty Termination  High Capacity Unbundled Local Loop - DS3 - Per Mile		\$9.19	φυθυ.υ1	φ304.30	φ254.05	φ170.10
A.10.2	High Capacity Unbundled Local Loop -DS3 -Incremental Cost - Manual Svc		ψ3.13				
A.16.3	Order vs. Electronic			\$36.84	\$36.84	\$19.01	\$19.01
A.16.4	High Capacity Unbundled Local Loop - OC3 - Facility Termination		\$618.88	\$787.84	\$262.31	\$109.04	\$105.91
A.16.5	High Capacity Unbundled Local Loop - OC3 - Per Mile		\$6.97	·	·	·	·
	High Capacity Unbundled Local Loopl - OC3 - Incremental Cost Manual Svc						
A.16.6	Order vs Electronic			\$36.84	\$36.84	\$19.01	\$19.01
A.16.7	High Capacity Unbundled Local Loop - OC12 - Facility Termination		\$2,246.28	\$992.37	\$262.31	\$109.04	\$105.91
A.16.8	High Capacity Unbundled Local Loop - OC12 - Per Mile		\$8.58				
	High Capacity Unbundled Local Loop -OC12 - Incremental Cost - Manual Svc						
A.16.9	Order vs. Electronic		£4.400.44	\$36.84	\$36.84	\$19.01	\$19.01
A.16.10	High Capacity Unbundled Local Loop - OC48 - Facility Termination High Capacity Unbundled Local Loop - OC48 - Per Mile		\$1,490.11	\$1,190	\$255.01	\$128.05	\$124.92
A.16.11	High Capacity Unbundled Local Loop - OC48 - Per Mile  High Capacity Unbundled Local Loop - OC48 - Incremental Cost - Manual Svc		\$28.14				
A.16.12	Order vs. Electronic			\$36.84	\$36.84	\$19.01	\$19.01
A.16.12 A.16.13	High Capacity Unbundled Local Loop - OC48 - Interface OC12 on OC48		\$678.67	\$177.59	\$163.78	\$109.04	\$105.91
A.10.13	High Capacity Unbundled Local Loop - OC48 - Interface OC12 on OC48  High Capacity Unbundled Local Loop - OC48 - Interface-Incremental Cost-		ψ010.01	ψ177.59	ψ103.76	ψ103.04	ψ103.31
A.16.14	Manual Svc Order vs Electronic			\$36.84	\$36.84	\$19.01	\$19.01
A.16.15	High Capacity Unbundled Local Loop - STS-1 - Facility Termination		\$389.35	\$595.37	\$304.50	\$215.82	\$151.15
A.16.16	High Capacity Unbundled Local Loop - STS-1 - Per Mile		\$9.19	,	,,,,,,,,,	<del>+</del> =:::: <b>2=</b>	Ţ <b>.</b>
	High Capacity Unbundled Local Loop - STS-1 - Incremental Cost - Manual Svc.		·				
A.16.17	Order vs. Electronic			\$36.84	\$36.84	\$19.01	\$19.01

	Unbundled Network Element			Nonrec	urring	Disconnect	
Cost Ref. No.		Zone	Recurring	First	Additional	First	Additional
	LOOP CONDITIONING						
A.17	LOOP CONDITIONING		004.45				
A.17.1	Unbundled Loop Modification - Load Coil / Equipment Removal - short		\$61.45				
	Unbundled Loop Modification - Load Coil / Equipment Removal - long - First			****			
A.17.2	and Additional		<b>***</b>	\$321.99			
A.17.3	Unbundled Loop Modification - Bridged Tap Removal		\$61.49				
A.17.4	Unbundled Loop Modification - Additive			\$12.36	\$12.36		
	Unbundled Sub-Loop Modification - 2W/4W Copper Distribution Load						
A.17.5	Coil/Equipment Removal First/Add'l			\$335.36	\$7.82		
	Unbundled Sub-Loop Modification - 2W/4W Copper Distribution Bridged Tap						
A.17.6	Removal First/Add'l			\$528.48	\$9.74		
A.19	LOOP TESTING BEYOND VOICE GRADE						
A.19.1	Loop Testing Beyond VG - Basic per 1/2 hour			\$115.94	\$55.45		
A.19.2	Loop Testing Beyond VG - Overtime per 1/2 hour			\$151.69	\$72.75		
A.19.3	Loop Testing Beyond VG - Premium per 1/2 hour			\$187.43	\$90.06		
A.19.198	Loop Testing Beyond VG - Basic per 1/2 hour - Testing			\$53.31	\$53.31		
A.19.298	Loop Testing Beyond VG - Overtime per 1/2 hour - Testing			\$69.93	\$69.93		
A.19.398	Loop Testing Beyond VG - Premium per 1/2 hour - Testing			\$86.56	\$86.56		
D.0	UNBUNDLED TRANSPORT AND LOCAL INTERCONNECTION						
<i>D.</i> 0	CHBONDEED TRANSFORT AND EGGAL INTERCONNECTION						
D.5	LOCAL CHANNEL - DEDICATED						
D.5.7	Local Channel - Dedicated - DS3 - Per Mile		\$7.15				
D.5.8	Local Channel - Dedicated - DS3 - Facility Termination		\$611.30	\$595.37	\$304.50	\$215.82	\$151.1
	Local Channel - Dedicated - DS3 -Incremental Cost - Manual Svc Order vs.			·	·	· I	·
D.5.9	Electronic			\$36.84	\$36.84	\$19.01	\$19.0°
D.5.10	Local Channel - Dedicated - OC3 - Per Mile		\$6.00		·		·
D.5.11	Local Channel - Dedicated - OC3 - Facility Termination		\$1,320.28	\$787.84	\$262.31	\$109.04	\$105.9°
	Local Channel - Dedicated - OC3 - Incremental Cost - Manual Svc Order vs.			·	·	· ·	·
D.5.12	Electronic			\$36.84	\$36.84	\$19.01	\$19.0°
D.5.13	Local Channel - Dedicated - OC12 - Per Mile	1	\$8.58		·		• • •
D.5.14	Local Channel - Dedicated - OC12 - Facility Termination		\$7,849.28	\$992.37	\$262.31	\$109.04	\$105.9°
	Local Channel - Dedicated - OC12 - Incremental Cost - Manual Svc Order vs.		. ,				,
D.5.15	Electronic			\$36.84	\$36.84	\$19.01	\$19.0°
D.5.16	Local Channel - Dedicated - OC48 - Per Mile		\$28.14	,	*****	,	, , , , ,
D.5.17	Local Channel - Dedicated - OC48 - Facility Termination		\$1,908.11	\$985.07	\$255.01	\$109.04	\$105.9°
	Local Channel - Dedicated - OC48 - Incremental Cost - Manual Svc Order vs.		. ,				,
D.5.18	Electronic			\$36.84	\$36.84	\$19.01	\$19.0°

		_		Nonrec	urring	Disconnect	
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional
D.5.19	Local Channel - Dedicated - OC48 - Interface OC12 on OC48		\$644.82	\$382.12	\$163.78	\$109.04	\$105.91
	Local Channel - Dedicated - OC48 - Interface - Inc. Cost - Man. Svc Order vs.						
D.5.20	Electronic			\$36.84	\$36.84	\$19.01	\$19.01
D.5.21	Local Channel - Dedicated - STS-1 - Facility Termination		\$599.59	\$588.07	\$297.20	\$215.82	\$151.15
	Local Channel - Dedicated - STS-1 - Incremental Cost - Manual Svc. Order vs.						
D.5.22	Electronic			\$36.84	\$36.84	\$19.01	\$19.01
D.5.23	Local Channel - Dedicated - STS-1 -Per Mile		\$7.15				
D.6	INTEROFFICE TRANSPORT - DEDICATED - DS3						
D.6.1	Interoffice Transport - Dedicated - DS3 - Per Mile		\$2.34				
D.6.2	Interoffice Transport - Dedicated - DS3 - Facility Termination		\$848.99	\$395.29	\$176.56	\$109.04	\$105.91
2.0.2	Interoffice Transport - DS3 - Incremental Cost - Manual Svc Order vs.		ψο .σ.σσ	φσσ.2σ	ψσ.σσ	ψ.σσ.σ.	ψ.σσ.σ.
D.6.3	Electronic			\$36.84	\$36.84	\$19.01	\$19.01
2.0.0				ψου.σ.:	ψοσιο .	ψ.σ.σ.	ψ.σ.σ.
D.7	INTEROFFICE TRANSPORT - DEDICATED - OC3						
D.7.1	Interoffice Transport - Dedicated - OC3 - Per Mile		\$4.43				
D.7.2	Interoffice Transport - Dedicated - OC3 - Facility Termination		\$2,361.11	\$689.30	\$163.78	\$130.87	\$130.87
	Interoffice Transport - Dedicated - OC3 - Incremental Cost - Manual Svc Order		<del></del>	<b>V</b>	********	******	*******
D.7.3	vs. Electronic			\$36.84	\$36.84	\$109.04	\$105.91
D.8	INTEROFFICE TRANSPORT - DEDICATED - OC12						
D.8.1	Interoffice Transport - Dedicated - OC12 - Per Mile		\$14.41				
D.8.2	Interoffice Transport - Dedicated - OC12 - Facility Termination		\$9,124.11	\$893.84	\$163.78	\$130.87	\$130.87
D.0.2	Interoffice Transport - Dedicated - OC12 - Incremental Cost - Manual Svc Order		ψ3,124.11	ψ093.04	ψ103.70	ψ130.07	ψ130.07
D.8.3	vs. Electronic			\$36.84	\$36.84	\$109.04	\$105.91
D.9	INTEROFFICE TRANSPORT - DEDICATED - OC48						
D.9.1	Interoffice Transport - Dedicated - OC48 - Per Mile		\$26.52				
D.9.2	Interoffice Transport - Dedicated - OC48 - Facility Termination		\$13,229.11	\$893.84	\$163.78	\$109.04	\$105.91
	Interoffice Transport - Dedicated - OC48 - Incremental Cost - Manual Svc.						
D.9.3	Order vs. Electronic			\$36.84	\$36.84	\$19.01	\$19.01
D.9.4	Interoffice Transport - Dedicated - OC48 - Interface OC12 on OC48			\$382.12	\$163.78	\$109.04	\$105.91
	Interoffice Transport - OC48 Interface - Incremental Cost-Manual Svc Order vs						
D.9.5	Elec			\$36.84	\$36.84	\$19.01	\$19.01
D.10	INTEROFFICE TRANSPORT - DEDICATED - STS-1						
D.10.1	Interoffice Transport - Dedicated - STS-1 - Per Mile		\$2.34				
D.10.2	Interoffice Transport - Dedicated - STS-1 - Facility Termination		\$849.30	\$395.29	\$176.56	\$109.04	\$105.91
D.10.3	Interoffice Transport - STS-1 - Incremental Cost - Manual Svc Order vs. Electronic			\$36.84	\$36.84	\$19.01	\$19.01

				Nonrec	urring	Discon	nnect	
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional	
D.12	INTEROFFICE TRANSPORT - DEDICATED - 4-WIRE VOICE GRADE							
D.12.1	Interoffice Transport - Dedicated - 4-Wire Voice Grade - Per Mile		\$0.0054					
D.12.2	Interoffice Transport - Dedicated - 4-Wire Voice Grade - Facility Termination		\$24.09	\$37.87	\$26.02	\$30.78	\$13.07	
	Interoffice Transpor t- Dedicated - 4-Wire VG-Incremental Cost-Manual Svc		·			·		
D.12.3	Order vs Elec			\$15.08	\$15.08	\$8.66	\$8.66	
E.0	SIGNALING NETWORK, DATA BASES, & SERVICE MANAGEMENT SYS.							
E.3	CCS7 SIGNALING TRANSPORT							
E.3.7	CCS7 Signaling Connection, Per link (A link) (Same as E.3.1)		\$17.84	\$130.84				
	CCS7 Signaling Connection, Per link (B link) (also known as D link)(Same as							
E.3.8	E.3.1)		\$17.84	\$130.84				
E.3.9	CCS7 Signaling Usage, Per ISUP Message(Same as E.3.3)		\$0.0000373					
E.3.10	CCS7 Signaling Usage Surrogate, per link per LATA per mo (9)(Same as E.3.5)		\$352.30					
E.3.11	CCS7 Signaling Point Code, Establishment or Change, per STP affected		·	\$121.77				
E.4	BELLSOUTH CALLING NAME (CNAM) DATABASE (DB) SERVICE							
E.4.1	CNAM for DB Owners - Service Establishment, Manual			\$43.27		\$39.79		
E.4.2	CNAM for Non DB Owners - Service Establishment, Manual			\$43.27	(0)	\$39.79	(2)	
E.4.3	CNAM for DB Owners Service Provisioning with Point Code Establishment			(I) \$1,868	(S) \$1,382	(I) \$507.09	(S) \$372.80	
E.4.4	CNAM for Non DB Owners Service Provisioning with Point Code Establishment			(I) \$645.50	(S) \$462.23	(I) \$519.01	(S) \$372.86	
E.4.5	CNAM for DB and Non DB Owners, Per Query		\$0.0010541					
E.5	BELLSOUTH ACCESS TO 911 SERVICE							
	BellSouth E911 Access - Local Channel - Dedicated - 2-wire Voice Grade							
E.5.1	(Same as D.5.1)	1	\$17.18		\$24.16		\$4.80	
		3	\$22.44	\$199.33	\$24.16	\$54.81 \$54.81	\$4.80	
	BellSouth E911 Access - Interoffice Transport - Dedicated - 2-wire Voice Grade	3	\$29.34	\$199.33	\$24.16	\$54.81	\$4.80	
E.5.2	Per Mile (Same as D.2.1)		\$0.02					
2.0.2	BellSouth E911 Access - Interoffice Transport - Dedicated - 2-wire VG Facility		Ψ0.02					
E.5.3	Term (Same as D.2.2)		\$18.58	\$55.39	\$17.37	\$27.96	\$3.5	
E.5.4	BellSouth E911 Access - Local Channel - Dedicated - DS1 (Same as D.5.3)	1	\$36.24		\$233.26		\$22.3	
		2	\$47.33	\$277.35	\$233.26		\$22.30	
		3	\$61.89	\$277.35	\$233.26	\$33.18	\$22.30	
E.5.5	BellSouth E911 Access - Interoffice Transport - Dedicated - DS1 Per Mile (Same as D.4.1)		\$0.36					
E.5.6	BellSouth E911 Access - Interoffice Transport - Dedicated - DS1 Per Facility Termination (Same as D.4.2)		\$77.86	\$112.40	\$76.27	\$19.55	\$14.99	
L.U.U	terminates. (earlie de Britz)		ψ11.00	ψ112. <del>4</del> 0	ψι υ.Ζι	ψ10.00	Ψ14.3	

				Nonreci	recurri	ng	Disconnect	
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	A	Additional	First	Additional
E.6	LNP QUERY SERVICE		<b>#</b> 0.000077					
E.6.1	LNP Cost Per query		\$0.0009277				<b>*</b>	
E.6.2	LNP Service Establishment Manual			\$23.0		<b>**</b>	\$21.71	(0) 0070 00
E.6.3	LNP Service Provisioning with Point Code Establishment			(I) \$1,1	19 (S)	\$571.71	(I) \$507.09	(S) \$372.86
G.0	SELECTIVE ROUTING							
G.11	SELECTIVE CARRIER ROUTING (AIN SOLUTION)							
G.11.1	Service Establishment per CLEC			\$190,6			\$16,200	
G.11.2	Service Establishment per End Office			\$317.	55		\$3.19	
G.11.4	Query Cost		\$0.0206047					
H.0	COLLOCATION							
H.3	ASSEMBLY POINT				-			
H.3.1	Assembly Point: 2-Wire Cross Connects		\$1.29	\$11.0	)3	\$10.09	\$11.29	\$10.19
H.3.2	Assembly Point: 4-Wire Cross Connects		\$2.22	\$11.	21	\$10.22	\$11.58	\$10.40
H.3.3	Assembly Point: DS-1 Cross Connects		\$12.77	\$28.3	30	\$16.79	\$11.61	\$10.50
H.3.4	Assembly Point 2-Wire Cross Connect Incremental Cost Manual vs. Electronic Service Order			\$1.	37	\$1.87	\$1.13	\$1.13
H.3.5	Assembly Point 4-Wire Cross Connect Incremental Cost Manual vs. Electronic Service Order			\$1.	37	\$1.87	\$1.16	\$1.16
H.3.6	Assembly Point DS1 Cross Connect Incremental Cost Manual vs. Electronic Service Order			\$1.8	37	\$1.87	\$1.16	\$1.16
H.6	PHYSICAL COLLOCATION IN THE REMOTE TERMINAL (RT)				+			
H.6.1	Physical Collocation In The Remote Terminal - Application Fee			\$580.2	20		\$312.76	
H.6.2	Physical Collocation In The Remote Terminal - Per Rack/Bay		\$220.41					
H.6.3	Physical Collocation In The Remote Terminal - Security Access Key		, , ,	\$24.0	69			
	Physical Collocation in the RT - Space Availability Report per premises			-				
H.6.4	requested			\$218. <sub>4</sub>	19			
H.6.5	Physical Collocation in the RT- Remote Site CLLI Code Request, per CLLI Code Requested			\$70.	31			

	Unbundled Network Element Zo			Nonrec	urring	Disconnect	
Cost Ref. No.		Zone	Recurring	First	Additional	First	Additional
J.0	OTHER						
J.1	DARK FIBER						
J.1.2	Dark Fiber, Per Four Fiber Strands, Per Route Mile or Fraction Thereof - Local Channel/Loop		\$58.83	\$1,121	\$153.19	\$580.26	\$357.17
J.1.3	Dark Fiber, Per Four Fiber Strands, Per Route Mile or Fraction Thereof - Interoffice		\$28.74	\$1,121	\$153.19	\$580.26	\$357.17
J.3	LOOP MAKE-UP						
J.3.1	Mechanized Loop Make-up		\$0.7644187				
J.3.3	Manual Loop Make-up w/o Facility Reservation Number		·	\$74.46			
J.3.4	Manual Loop Make-up w/ Facility Reservation Number			\$77.18			
J.4	LINE SHARING SPLITTER IN THE CENTRAL OFFICE						
J.4.1	Line Sharing Splitter - per Splitter System 96-Line Capacity in the Central Office		\$183.79	371.63		349.37	
J.4.2	Line Sharing Splitter - per Splitter System 24-Line Capacity in the Central Office		\$45.95	371.63		349.37	
J.4.3	Line Sharing Splitter - per Line Activation in the Central Office		\$8.70	\$39.39	\$15.70	\$35.06	\$10.79
J.4.4	Line Sharing Splitter - per Subsequent Activity per Line Arrangement		\$0.27	\$34.56	\$12.62	\$16.43	\$1.64
J.4.6	Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per LSOD)			\$108.66		\$82.12	
J.4.7	Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per order for J.4.7)			\$54.40		\$10.59	
0.4.7	Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per			ψ0+.+0	U	ψ10.55	
J.4.8	occurrence of each group of 24 lines (48 pairs))			(S	\$15.63	(	S) \$18.2
J.5	ACCESS TO THE DCS						
J.5.1	Customer Reconfiguration Establishment			\$2.78		\$3.32	
J.5.2	DS1 DCS Termination with DS0 Switching		\$23.35	\$41.14	\$34.25	\$29.94	\$24.08
J.5.3	DS1 DCS Termination with DS1 Switching		\$13.46	\$27.79	\$20.90	\$21.99	\$16.12
J.5.4	DS3 DCS Termination with DS1 Switching		\$150.88	\$41.14	\$34.25	\$29.94	\$24.08
L.0	ACCESS DAILY USAGE FILE (ADUF)						
L.1	ACCESS DAILY USAGE FILE (ADUF)						
L.1.1	ADUF, Message Processing, per message		\$0.0158054				
L.1.3	ADUF, Data Transmission (CONNECT:DIRECT), per message		\$0.0001387				
M.0	DAILY USAGE FILES						
M.1	ENHANCED OPTIONAL DAILY USAGE FILE						
M.1.1	Enhanced Optional Daily usage File: Message Processing, Per Message		\$0.2921174				

			Recurring	Nonrecurring		Disconnect	
Cost Ref. No.	Unbundled Network Element	Zone		First	Additional	First	Additional
P.0	UNBUNDLED LOOP COMBINATIONS						
	EVENUED A WIDE DOA DIGITAL LOOP WITH DEDIGATED DOG						
D 42	EXTENDED 4-WIRE DS1 DIGITAL LOOP WITH DEDICATED DS3 INTEROFFICE TRANSPORT						
<b>P.13</b> P.13-1	First DS1 in DS3	1	\$1,153.26				
1.101	1 1100 201 111 200	2	\$1,170.93				
		3	\$1,194.12				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			<b>Ф</b> ГО 70	<b>#24.02</b>	<b>CO 40</b>	<b>CO 46</b>
	Combination Switch -As-IS			\$52.73	\$24.62	\$9.12	\$9.12
	Nonrecurring - EXTENDED 4-WIRE DS1 DIGITAL LOOP WITH DEDICATED						
	DS3 INTEROFFICE TRANSPORT- NEW			\$965.91	\$400.64	\$161.42	\$67.08
			4				
P.13-2	D.6.1 Interoffice Transport - Dedicated - DS3 - Per Mile		\$2.34				
P.13-3	Additional DS1 in same DS3	1	\$75.45				
	Additional Do Fill Games Do	2	\$93.12				
		3	\$116.31				
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		
<b>P.16</b> P.16-1	2-WIRE LOOP/ 2 WIRE VOICE GRADE IO TRANSPORT/ 2 WIRE PORT Fixed - Switch as is	4	£40.00	C44.40	\$3.52		
P.16-1	Fixed - Switch as is	2	\$40.00 \$45.07	\$11.18 \$11.18	\$3.52 \$3.52		
		3	\$51.72	\$11.18	\$3.52		
			70.11.2	· · · · · ·	75.52		
P.16.2	D.2.1 Interoffice Transport - Dedicated - 2-Wire Voice Grade - Per Mile		\$0.0174				
	EXTENDED 2-WIRE VOICE GRADE LOOP/ 2 WIRE VOICE GRADE						
P.23	INTEROFFICE TRANSPORT						
P.23-1	Fixed	1	\$38.35				
		2	\$43.42				
		3	\$50.07				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice						
	Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.12
					·	·	•
	Nonrecurring - EXTENDED 2-WIRE VOICE GRADE LOOP/ 2 WIRE VOICE			<b>*</b> * * *			<b></b>
	GRADE INTEROFFICE TRANSPORT - NEW			\$251.11	\$100.39	\$142.26	\$41.86
P.23-2	D.2.1 Interoffice Transport - Dedicated - 2-Wire Voice Grade - Per Mile		\$0.0174				
			72.2.1				

			_	Nonrec	urring	Disconnect	
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional
P.24	EXTENDED 4-WIRE VOICE GRADE LOOP/ 4 WIRE VOICE GRADE INTEROFFICE TRANSPORT						
P.24-1	Fixed	1	\$52.00				
1.24-1	i ixeu	2	\$52.00 \$59.56				
		3	\$69.48				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.1
	Nonrecurring - EXTENDED 4-WIRE VOICE GRADE LOOP/ 4 WIRE VOICE GRADE INTEROFFICE TRANSPORT - NEW			\$251.11	\$100.39	\$142.26	\$41.8
P.24-2	D.12.1 Interoffice Transport - Dedicated - 4-Wire Voice Grade - Per Mile		\$0.0054				
P.25	EXTENDED DS3 DIGITAL LOOP WITH DEDICATED DS3 INTEROFFICE TRANSPORT						
P.25-1	Fixed		\$1,228.44				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.1
	Nonrecurring - EXTENDED DS3 DIGITAL LOOP WITH DEDICATED DS3 INTEROFFICE TRANSPORT - NEW			\$784.76	\$355.52	\$171.21	\$80.6
P.25-2	D.6.1 Interoffice Transport - Dedicated - DS3 - Per Mile		\$2.34				
P.25-3	A.16.2 High Capacity Unbundled Local Loop - DS3 - Per Mile		\$9.19				
P.26	EXTENDED STS1 DIGITAL LOOP WITH DEDICATED STS1 INTEROFFICE TRANSPORT						
P.26-1	Fixed		\$1,243.86				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.1
	Nonrecurring - EXTENDED STS1 DIGITAL LOOP WITH DEDICATED STS1 INTEROFFICE TRANSPORT - NEW			\$784.76	\$355.52	\$171.21	\$80.6
P-26-2	D.10.1 Interoffice Transport - Dedicated - STS-1 - Per Mile		\$2.34				
P.26-3	A.16.16 High Capacity Unbundled Local Loop - STS-1 - Per Mile		\$9.19				

				Nonrecu	urring	Disconnect	
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional
P.50	4-WIRE DS1 LOOP WITH CHANNELIZATION WITH PORT						
P.50.VG-1	First Voice Grade in DS1 - Switch as is	1	\$196.36	\$303.61	\$15.74		
		2	\$214.03	\$303.61	\$15.74		
		3	\$237.22	\$303.61	\$15.74		
P.50.VG-2	Additional Voice Grade in same DS1		\$6.51				
P.50.DID-1	First 2-Wire DID in DS1 - Switch as is	1	\$201.23	\$303.61	\$15.74		
		2	\$218.90	\$303.61	\$15.74		
		3	\$242.09	\$303.61	\$15.74		
P.50.DID-2	Additional 2-Wire DID in same DS1		\$11.13				
P.50.ISDN-1	First ISDN in DS1 - Switch as is	1	\$212.36	\$303.61	\$15.74		
		2	\$230.03	\$303.61	\$15.74		
		3	\$253.22	\$303.61	\$15.74		
P.50.ISDN-2	Additional ISDN in same DS1		\$22.51				
P.50.4	4-Wire DS1 Loop/Channelization Port Combination - Subsequent Activity - Add Lines - Per Line			\$89.90			
P.50.5	4-Wire DS1 Loop/Channelization Port Combination - Subsequent Activity - Add Trunks - Per Trunk			\$117.43			
P.51	EXTENDED 2-WIRE ISDN LOOP WITH DS1 INTEROFFICE TRANSPORT						
P.51-1	First 2-Wire ISDN in DS1	1	\$188.66				
		2	\$195.46				
		3	\$204.39				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.12
	Nonrecurring - EXTENDED 2-WIRE ISDN LOOP WITH DS1 INTEROFFICE TRANSPORT - NEW			\$485.24	\$198.75	\$146.05	\$44.50
P.51-2	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$0.3562				
P.51-3	Additional 2-wire ISDN in same DS1	1	\$25.46				
		3	\$32.26 \$41.19				
			<b></b>				
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		

				Nonrec	urring	Disconnect	
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional
	EXTENDED 4-WIRE DS1 DIGITAL LOOP WITH DEDICATED STS-1						
<b>P.52</b> P.52-1	INTEROFFICE TRANSPORT First in DS1 in STS1	4	¢4.447.50				
P.52-1	FIISUII DOT III OTOT	2	\$1,147.59 \$1,165.26				
		3	\$1,188.45				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.12
	Nonrecurring - EXTENDED 4-WIRE DS1 DIGITAL LOOP WITH DEDICATED STS-1 INTEROFFICE TRANSPORT - NEW			\$965.91	\$400.64	\$161.42	\$67.08
P.52-2	D.10.1 Interoffice Transport - Dedicated - STS-1 - Per Mile		\$2.34				
P.52-3	Additional DS1 in same STS1	1	\$75.31				
		2	\$92.98				
		3	\$116.17				
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		
	EXTENDED 2-WIRE VOICE GRADE LOOP WITH DEDICATED DS1						
P.53 P.53-1	INTEROFFICE TRANSPORT W/ 3/1 MUX First 2-Wire VG in First DS1 in DS3	1	\$416.86				
F.33-1	I list 2-wile vo ii i list bot iii bos	2	\$421.93				
		3	\$428.58				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.12
	Nonrecurring - EXTENDED 2-WIRE VOICE GRADE LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX - NEW			\$485.24	\$198.75	\$146.05	\$44.50
P.53-2	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$0.3562				
P.53-3	Additional 2-Wire VG in same DS1	1	\$17.61				
		3	\$22.68 \$29.33				
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		

				Nonrec	urring	Disco	nnect
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional
P.53-4	Additional DS1 in same DS3		\$176.35				
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		
P.54	EXTENDED 4-WIRE VOICE GRADE LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX						
P.54-1	First 4-Wire VG in First DS1 in DS3	1	\$429.71				
		2	\$437.27				
		3	\$447.19				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.12
	Nonrecurring - EXTENDED 4-WIRE VOICE GRADE LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX - NEW			\$485.24	\$198.75	\$146.05	\$44.50
P.54-2	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$0.3562				
P.54-3	Additional 4-Wire VG in same DS1	1	\$25.75				
		2	\$33.31				
		3	\$43.23				
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		
P.54-4	Additional DS1 in same DS3		\$176.35				
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		

		_		Nonrec	urring	Disconnect	
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional
P.55	EXTENDED 4-WIRE 56 OR 64 KBPS DIGITAL LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX						
P.55-1	First 4-Wire in First DS1 in DS3	1	\$436.82				
		2	\$446.33				
		3	\$458.83			-	
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.12
	Nonrecurring - EXTENDED 4-WIRE 56 OR 64 KBPS DIGITAL LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX - NEW			\$485.24	\$198.75	\$146.05	\$44.50
P.55-2	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$0.3562				
P.55-3	Additional 4-Wire in same DS1	1	\$33.06				
		2	\$42.57				
		3	\$55.07				
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		
P.55-4	Additional DS1 in same DS3		\$176.35				
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		
P.56	EXTENDED 2-WIRE ISDN LOOP WITH DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX						
P.56-1	First 2-Wire in First DS1 in DS3	1	\$429.22				
		2	\$436.02				
		3	\$444.95				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.12
	Nonrecurring - EXTENDED 2-WIRE ISDN LOOP WITH DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX - NEW			\$485.24	\$198.75	\$146.05	\$44.50
P.56-2	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$0.3562				
P.56-3	Additional 2-Wire in same DS1	1	\$25.46				
		2	\$32.26				
		3	\$41.19				

Notes: (I) - Initial; (S) - Subsequent (231443)

				Nonrec	urring	Discor	nnect
Cost Ref. No.	Unbundled Network Element	Zone	Recurring	First	Additional	First	Additional
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		
P.56-4	Additional DS1 in same DS3		\$176.35				
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		
P.57	EXTENDED 4-WIRE DS1 DIGITAL LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX						
P.57-1	First 4-Wire DS1 in DS3	1	\$380.86				
		2	\$398.53				
		3	\$421.72				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.1
	Nonrecurring - EXTENDED 4-WIRE DS1 DIGITAL LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX - NEW			\$485.24	\$198.75	\$146.05	\$44.5
P.57-2	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$0.3562				
P.57-3	Additional 4-Wire DS1 in same DS3	1	\$153.31				
		2	\$170.98				
		3	\$194.17				
	P.17.16 Nonrecurring Cost - New Feature Activation for Combination Use Only			\$36.96	\$14.84		
P.58	EXTENDED 4-WIRE 56 OR 64 KBPS DIGITAL LOOP WITH DS0 INTEROFFICE TRANSPORT						
P.58-1	Fixed	1	\$52.29				
		2	\$61.80				
		3	\$74.30				
	P.17.1 Nonrecurring Cost for Extended Loop or Local Channel and Interoffice Combination Switch -As-Is			\$52.73	\$24.62	\$9.12	\$9.1
	Nonrecurring - EXTENDED 4-WIRE 56 OR 64 KBPS DIGITAL LOOP WITH DS0 INTEROFFICE TRANSPORT - NEW						
P.58-2	D.3.1 Interoffice Transport - Dedicated - DS0 - Per Mile		\$0.0174				

Cost Ref. No.	UNE Combination UNEs Included in Combination	Source of Rate (Cost Study Docket No.)
P.13	4-Wire DS1 Digital Loop with Dedicated DS3 Interoffice Transport (EEL)	(Cost Staay Bocket 1401)
A.9.1	4-Wire DS1 Digital Loop, per month	97-01262
D.6.2	Interoffice Transport – Dedicated – DS3 - Facility Termination, per month	00-00544
D.6.1	Interoffice Transport – Dedicated – DS3 - Per mile, per month	00-00544
P.17.1	Nonrecurring – Switch-as-is	97-01262
	Nonrecurring – New	00-00544
P.16	2-Wire Voice Grade Loop with 2-Wire Voice Grade Interoffice Transport with 2-Wire Port	
A.1.2	2-Wire Analog Voice Grade Loop – Service Level 2, per month	97-01262
D.2.2	Interoffice Transport - Dedicated - 2-Wire Voice Grade - Facility Termination, per month	97-01262
D.2.1	Interoffice Transport – Dedicated - 2-Wire Voice Grade - Per mile, per month	97-01262
B.1.1	2-Wire Analog Line Port, per month	97-01262
	Nonrecurring – Switch-as-is	00-00544
7.22		
P.23	2-Wire Voice Grade Loop with 2-Wire Voice Grade Interoffice Transport (EEL)	
A.1.2	2-Wire Voice Grade Loop – Service Level 2, per month	
D.2.2	Interoffice Transport – Dedicated - 2-Wire Voice Grade - Facility Termination, per month	
D.2.1	D.2.1 Interoffice Transport – Dedicated – 2-Wire Voice Grade - Per mile, per month	
P.17.1	Nonrecurring – Switch-as-is	97-01262
	Nonrecurring – New	00-00544

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Cost Ref. No.	UNE Combination  UNEs Included in Combination	
P.24	4-Wire Voice Grade Loop with 4-Wire Voice Grade Interoffice Transport (EEL)	
A.4.1	4-Wire Analog Voice Grade Loop, per month	97-01262
D.12.2	Interoffice Transport – Dedicated - 4-Wire Voice Grade - Facility Termination, per month	00-00544
D.12.1	Interoffice Transport – Dedicated - 4-Wire Voice Grade - Per mile, per month	00-00544
P.17.1	Nonrecurring – Switch-as-is	97-01262
	Nonrecurring – New	00-00544
P.25	DS3 Digital Loop with Dedicated DS3 Interoffice Transport (EEL)	
A.16.1	High Capacity Unbundled Local Loop – DS3 – Facility Termination, per month	00-00544
D.6.2	Interoffice Transport – Dedicated – DS3 – Facility Termination, per month	00-00544
A.16.2	High Capacity Unbundled Local Loop – DS3 – Per mile, per month	00-00544
D.6.1	Interoffice Transport – Dedicated – DS3 – Per mile, per month	00-00544
P.17.1	Nonrecurring – Switch-as-is	97-01262
	Nonrecurring – New	00-00544
P.26	STS-1 Digital Loop with Dedicated STS-1 Interoffice Transport (EEL)	
A.16.15	High Capacity Unbundled Local Loop – STS-1 – Facility Termination, per month	00-00544
D.10.2	Interoffice Transport – Dedicated – STS-1 – Facility Termination, per month	00-00544
A.16.16		
D.10.1	Interoffice Transport – Dedicated – STS-1 – Per mile, per month	00-00544
P.17.1	Nonrecurring – Switch-as-is	97-01262
	Nonrecurring – New	00-00544

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Cost Ref. No.	UNIE Combination	Source of Rate
	UNE Combination UNEs Included in Combination	(Cost Study Docket No.)
P.50	4-Wire DS1 Loop with Channelization with Port	,
A.9.1	4-Wire DS1 Digital Loop, per month	97-01262
B.1.1/B.1.3/B.1.5	2-Wire Voice Grade/DID/ISDN Line Port, per month	97-01262
Q.1.1	D4 Channel Bank Inside CO – System, per month	00-00544
Q.1.4/Q.1.3	Unbund led Loop Concentration – POTS Card/ISDN BRITE Card, per month	00-00544
	Nonrecurring – Switch-as-is	00-00544
	Nonrecurring – Subsequent Activity – Add Lines, per line	00-00544
	Nonrecurring – Subsequent Activity – Add Trunks, per trunk	00-00544
P.51	2-Wire ISDN Digital Loop with DS1 Interoffice Transport (EEL)	
A.5.1	2-Wire ISDN Digital Grade Loop, per month	97-01262
D.4.2	Interoffice Transport – Dedicated – DS1 – Facility Termination, per month	97-01262
D.4.1	Interoffice Transport – Dedicated – DS1 – Per mile, per month	97-01262
A.18.1	Channelization – Channel System DS1 to DS0, per month	97-01262
A.18.3	Interface Unit, Interface DS1 to DS0 – BRITE Card, per month	97-01262
P.17.1	Nonrecurring – Switch-as-is	97-01262
	Nonrecurring – New	00-00544
	Nonrecurring – New Feature Activation for Combination Use Only	00-00544
P.52	4-Wire DS1 Digital Loop with Dedicated STS-1 Interoffice Transport (EEL)	
A.9.1	4-Wire DS1 Digital Loop, per month	97-01262
D.10.2	Interoffice Transport – Dedicated – STS-1 – Facility Termination, per month	00-00544
D.10.1	Interoffice Transport – Dedicated – STS-1 – Per mile, per month	97-01262
A.18.5	Channelization – Channel System DS3 to DS1, per month	97-01262
A.18.6	Interface Unit – Interface DS3 to DS1, per month	97-01262
P.17.1	Nonrecurring – Switch-as-is	97-01262
	Nonrecurring – New	00-00544
	Nonrecurring – New Feature Activation for Combination Use Only	00-00544

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Cost Ref. No.	ost Ref. No. UNE Combination UNEs Included in Combination					
		(Cost Study Docket No.)				
P.53	2-Wire Voice Grade Loop with Dedicated DS1 Interoffice Transport with 3/1 MUX (EEL)					
A.1.2	2-Wire Analog Voice Grade Loop – Service Level 2, per month	97-01262				
D.4.2	Interoffice Transport – Dedicated – DS1 – Facility Termination, per month	97-01262				
D.4.1	Interoffice Transport – Dedicated – DS1 – Per mile, per month	97-01262				
A.18.5	Channelization – Channel System DS3 to DS1, per month	97-01262				
A.18.6	Interface Unit – Interface DS3 to DS1, per month	97-01262				
A.18.1	Channelization – Channel System DS1 to DS0, per month	97-01262				
A.18.4	Interface Unit – Interface DS1 to DS0 – Voice Grade Card, per month	97-01262				
P.17.1	Nonrecurring – Switch-as-is	97-01262				
	Nonrecurring – New					
	Nonrecurring – New Feature Activation for Combination Use Only					
P.54	4-Wire Voice Grade Loop with Dedicated DS1 Interoffice Transport with 3/1 MUX (EEL)					
A.4.1	4- Wire Analog Voice Grade Loop, per month	97-01262				
D.4.2	Interoffice Transport – Dedicated – DS1 – Facility Termination, per month	97-01262				
D.4.1	Interoffice Transport – Dedicated – DS1 – Per mile, per month	97-01262				
A.18.5	Channelization – Channel System DS3 to DS1, per month	97-01262				
A.18.6	Interface Unit – Interface DS3 to DS1, per month	97-01262				
A.18.1	1					
P.17.1	Nonrecurring – Switch-as-is	97-01262				
	Nonrecurring – New	00-00544				
	Nonrecurring – New Feature Activation for Combination Use Only	00-00544				

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Cost Ref. No.	UNE Combination UNEs Included in Combination	Source of Rate			
P.55	4-Wire 56 or 64 Kbps Digital Loop with Dedicated DS1 Interoffice Transport with 3/1 MUX (EEL)				
A.10.1	4-Wire 19, 56 or 64 Kbps Digital Grade Loop, per month	97-01262			
D.4.2	Interoffice Transport – Dedicated – DS1 – Facility Termination, per month	97-01262			
D.4.1	Interoffice Transport – Dedicated – DS1 – Per mile, per month	97-01262			
A.18.5	Channe lization – Channel System DS3 to DS1, per month	97-01262			
A.18.6	Interface Unit – Interface DS3 to DS1, per month	97-01262			
A.18.1	Channelization – Channel System DS1 to DS0, per month	97-01262			
A.18.4	Interface Unit – Interface DS1 to DS0 – OCU-DP Card, per month	97-01262			
P.17.1	Nonrecurring – Switch-as-is	97-01262			
	Nonrecurring – New	00-00544			
	Nonrecurring – New Feature Activation for Combination Use Only	00-00544			
P.56	2-Wire ISDN Loop with DS1 Interoffice Transport with 3/1 MUX (EEL)				
A.5.1	2-Wire ISDN Digital Grade Loop, per month	97-01262			
D.4.2	Interoffice Transport – Dedicated – DS1 – Facility Termination, per month	97-01262			
D.4.1	Interoffice Transport – Dedicated – DS1 – Per mile, per month	97-01262			
A.18.5	Channelization – Channel System DS3 to DS1, per month	97-01262			
A.18.6	Interface Unit – Interface DS3 to DS1, per month	97-01262			
A.18.1	Channelization – Channel System DS1 to DS0, per month	97-01262			
A.18.4	Interface Unit – Interface DS1 to DS0 – BRITE Card, per month	97-01262			
P.17.1	Nonrecurring – Switch-as-is	97-01262			
	Nonrecurring – New	00-00544			
	Nonrecurring – New Feature Activation for Combination Use Only	00-00544			

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Cost Ref. No.	UNE Combination UNEs Included in Combination	Source of Rate				
	CTVLS included in Combination					
P.57	4-Wire DS1 Digital Loop with Dedicated DS1 Interoffice Transport with 3/1 MUX (EEL)					
A.9.1	4-Wire DS1 Digital Loop, per month	97-01262				
D.4.2	Interoffice Transport – Dedicated – DS1 – Facility Termination, per month	97-01262				
D.4.1	Interoffice Transport – Dedicated – DS1 – Per mile, per month	97-01262				
A.18.5	Channelization – Channel System DS3 to DS1, per month	97-01262				
A.18.6	Interface Unit – Interface DS3 to DS1, per month	97-01262				
P.17.1	P.17.1 Nonrecurring – Switch-as-is					
	Nonrecurring – New					
	Nonrecurring – New Feature Activation for Combination Use Only	00-00544				
P.58	A Wine 56 on 64 What Digital I can with DS0 Interesting Transport (EEI)					
	4-Wire 56 or 64 Kbps Digital Loop with DS0 Interoffice Transport (EEL)	07.01070				
A.10.1	4-Wire 19, 56 or 64 Kbps Digital Grade Loop, per month					
D.3.2	D.3.2 Interoffice Transport – Dedicated – DS0 – Facility Termination, per month					
D.3.1	D.3.1 Interoffice Transport – Dedicated – DS0 – Per mile, per mont					
P.17.1 Nonrecurring – Switch-as-is		97-01262				
	Nonrecurring – New	00-00544				

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### **AFFIDAVIT**

STATE OF: Georgia COUNTY OF: Fulton

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared John A. Ruscilli –Senior Director – State Regulatory, BellSouth Telecommunications, Inc., who, being by me first duly sworn deposed and said that:

He is appearing as a witness before the Tennessee Regulatory Authority in Docket No. 00-00544 on behalf of BellSouth Telecommunications, Inc., and if present before the Authority and duly sworn, his testimony would be set forth in the annexed testimony consisting of 34 pages and 2 exhibit(s).

John A. Ruscilli

ARIN

Sworn to and subscribed before me on /////

NOTAROPUBLIC

1		BELLSOUTH TELECOMMUNICATIONS, INC.
2		DIRECT TESTIMONY OF W. KEITH MILNER
3		BEFORE THE TENNESSEE REGULATORY AUTHORITY
4		DOCKET NO. 00-00544
5		NOVEMBER 13, 2000
6		
7	Q.	PLEASE STATE YOUR NAME, YOUR BUSINESS ADDRESS, AND
8		YOUR POSITION WITH BELLSOUTH TELECOMMUNICATIONS, INC.
9		(BELLSOUTH).
10		
11	A.	My name is W. Keith Milner. My business address is 675 West Peachtree
12		Street, Atlanta, Georgia 30375. I am Senior Director - Interconnection
13		Services for BellSouth. I have served in my present role since February
14		1996, and have been involved with the management of certain issues
15		related to local interconnection, resale, and unbundling.
16		
17	Q.	PLEASE SUMMARIZE YOUR BACKGROUND AND EXPERIENCE.
18		
19	A.	My business career spans over 30 years and includes responsibilities in
20		the areas of network planning, engineering, training, administration, and
21		operations. I have held positions of responsibility with a local exchange
22		telephone company, a long distance company, and a research and
23		development company. I have extensive experience in all phases of
24		telecommunications network planning, deployment, and operations in both
25		the domestic and international arenas.

1		
2		I graduated from Fayetteville Technical Institute in Fayetteville, North
3		Carolina, in 1970, with an Associate of Applied Science in Business
4		Administration degree. I later graduated from Georgia State University in
5		1992 with a Master of Business Administration degree.
6		
7	Q.	HAVE YOU TESTIFIED PREVIOUSLY BEFORE ANY STATE PUBLIC
8		SERVICE COMMISSION, AND IF SO, BRIEFLY DESCRIBE THE
9		SUBJECT OF YOUR TESTIMONY?
10		
11	A.	I have previously testified before the state public service commissions in
12		Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, and South
13		Carolina, the Tennessee Regulatory Authority, and the Utilities
14		Commission in North Carolina on the issues of technical capabilities of the
15		switching and facilities network regarding the introduction of new service
16		offerings, expanded calling areas, unbundling, and network
17		interconnection.
18		
19	Q.	WHAT IS THE PURPOSE OF YOUR TESTIMONY BEING FILED
20		TODAY?
21		
22	A.	In my testimony, I will address the technical aspects of specific network-
23		related issues such as loop deployment, XDSL loop offerings, line sharing,
24		access to unbundled sub-loop elements, and customized routing.

### **UNE Loop Deployment**

2

1

Q. PLEASE PROVIDE THE NETWORK TECHNOLOGY ASSUMPTIONS
 USED IN DEVELOPING THE UNE LOOP COST STUDY.

5

A. The network infrastructure design in the loop cost methodology starts with two basic assumptions. First, loops up to 12,000 feet long (measured from the central office) are designed using only twisted pair copper facilities. Second, loops longer than 12,000 feet are provisioned using fiber optic cable loop feeder facilities and Next Generation Digital Loop Carrier (NGDLC).

12

13 Q. PLEASE EXPLAIN WHY FIBER LOOP FEEDER FACILITIES ARE USED
14 IN CONJUNCTION WITH DIGITAL LOOP CARRIER RATHER THAN
15 ONLY TWISTED PAIR COPPER FACILITIES FOR LOOPS LONGER
16 THAN 12,000 FEET.

17

Α. In BellSouth's costing methodology for voice grade (or "narrowband") 18 19 services, costs were developed for loops of increasing length using both copper cable facilities and fiber fed digital loop carrier. Depending on the 20 type of construction (that is, aerial versus buried cable) and the volume of 21 demand (cable size or NGDLC size), the economic crossover distance 22 (that is, the point at which loops provisioned using DLC is more 23 24 economically efficient than using copper cable loops) for voice grade 25 services is approximately 12,000 feet from the central office.

It should be noted that, in actual network design, voice grade services are mixed with demand for other types of service such as DS-1 services and other higher bandwidth services. In selecting the infrastructure design for a network to meet all of these demands, new copper cable is rarely the facility of choice for the loop feeder network. Instead, fiber cable with fiber optic multiplexers and NGDLC are used to meet the combined demand on the cable route.

Q. WHERE FIBER FED NGDLC IS PROVISIONED, PLEASE EXPLAIN
WHAT DESIGN CRITERIA ARE USED TO DETERMINE THE DESIGN
OF THE CABLE PLANT EXTENDING FROM THE NGDLC TO THE
CUSTOMER LOCATION.

Α.

Carrier Serving Area (CSA) design provides the rules for provisioning the cable plant extending from the NGDLC to the customer location. This part of the loop is referred to as loop distribution. CSA design rules limit the total loop distribution length from the NGDLC site to the customer to 12,000 feet. Included in this 12,000 feet may be a maximum of 2,500 feet of bridged tap. No single bridged tap may be longer than 2,000 feet. The concept of bridged tap itself is discussed later in this testimony.

Q. PLEASE EXPLAIN THE BENEFIT OF USING THE CARRIER SERVING AREA DESIGN.

The economics that limit copper cable deployment distances from the central office to the customer location are the same as those that limit copper cable deployment from the NGDLC to the customer location (that is, the part of the loop referred to as loop distribution). In addition to the economic benefits derived from the CSA design itself, the 12,000 foot maximum copper cable length makes copper loops compatible with many of the digital subscriber line (DSL) technologies used today in providing advanced services.

Α.

Q. WHAT IS THE DIFFERENCE BETWEEN NGDLC AND OTHER FORMS
OF DIGITAL LOOP CARRIER (DLC)?

Α.

NGDLC describes a newer version of digital loop carrier equipment that provides many enhanced services and cost-reducing features that are not available on the older DLC systems. NGDLC systems are designed to support a larger capacity of lines, up to 2,016, from a single common equipment set compared to older vintages of DLC. For example, the larger capacity of NGDLC is a significant improvement over the 96-line capacity of the older vintage DLC referred to as "SLC-96", manufactured by Lucent Technologies.

Older vintage DLC cannot mix switched circuits and non-switched circuits within a 96-line group economically and can only use integrated central office alternatives economically when the 96-line group consists almost entirely of switched circuits. In contrast, NGDLC remote terminals can be

configured on a circuit by circuit basis using integrated or non-integrated central office alternatives to provide switched and non-switched services.

In providing switched services, NGDLC can be integrated with the local digital switch directly without intervening interface equipment. In this mode of operation, traffic from the remote NGDLC site to the central office can be concentrated onto only the number of circuits required by the types of services provisioned from that site. Typically, residential services can be concentrated at a 4:1 ratio. This means that, on average, only one (1) line of capacity is required from the NGDLC site to the switch for each of four (4) residential lines served from the NGDLC. For business services the typical concentration ratio is 3:1. The actual concentration ratio chosen for a given application is a function of the traffic load to be carried by the NGDLC equipment. The higher the traffic load, the lower the concentration ratio. Stated another way, the higher the traffic load, the more transmission paths required between the NGDLC equipment to the central office switching equipment.

In the older DLC systems, when DLC is integrated with the switch, it can be configured with either no concentration or with 2:1 concentration. In either circumstance, older DLC systems use more feeder capacity per line than do NGDLC systems since the use of NGDLC allows higher concentration ratios (and thus less loop feeder capacity) than older vintages of DLC.

In providing non-switched services, NGDLC has the capability, on a line-by-line basis, to provision remote NGDLC lines through the non-integrated or "universal" capacity of the NGDLC central office terminal. This allows non-switched services to be routed around the central office switch to connect with the other customer locations of the non-switched services or to interconnect with another telecommunications carrier's facilities. Since these services are not switched, concentration is not feasible.

Q. WHY IS NGDLC ASSUMED IN THE LOOP COST METHODOLOGY?

11 A. There are three reasons. First, the larger line capacity on the NGDLC

12 system achieves economies of scale, producing lower overall equipment

13 costs. Second, the capability to mix switched and non-switched services

14 on the same system eliminates wasted capacity, which improves the

15 economic benefit of using NGDLC. Finally, the combination of larger line

16 capacity and greater concentration capability reduces loop feeder capacity

17 requirements resulting in lower overall costs.

Q. IN DISCUSSING OLDER VINTAGE DLC AND NGDLC, YOU MENTION INTEGRATION WITH THE CENTRAL OFFICE SWITCH. PLEASE DESCRIBE THE PROCEDURES THAT ARE FOLLOWED TO MAKE INTERFACING WITH THE SWITCH POSSIBLE.

A. Two technical documents provide descriptions of digital loop carrier systems and how they interface with local digital switches in the integrated

configurations. The first document to be issued was Technical Reference-008 (TR-008). This document, authored by Bell Communications
Research, Inc. or "Bellcore" (now Telecordia), described the SLC-96 DLC system manufactured by AT&T before divestiture, and the document itself was jointly owned by AT&T and the Regional Bell Operating Companies (RBOCs) at divestiture. A major portion of that technical reference is still in use today and describes the interface that allows remote NGDLC/DLC to connect directly to a local digital switch at the DS-1 level in what is referred to as an integrated configuration.

This configuration allows lines to be provisioned with channelization circuit packs at the remote NGDLC/DLC but without per line circuit packs at the central office switch. TR-008 describes two alternatives for this integrated capability.

TR-008 Mode I is a non-concentrated alternative that requires feeder capacity for every line on a full time basis. When this alternative is used, four DS-1s (each with 24 channels for a total of 96 channels) are required for each 96-line capacity TR-008 remote NGDLC/DLC system. This configuration is used when high usage lines are to be served from the remote NGDLC/DLC system. TR-008 Mode II is a concentrated alternative that provides 2:1 concentration. When this alternative is used, two DS-1s (each with 24 channels for a total of 48 channels) are required for each 96-line capacity TR-008 remote NGDLC/DLC system.

Generic Requirement 303 (GR-303) (authored by Bellcore) provides a set of generic requirements that describe more flexible NGDLC system types and a more flexible interface to a local digital switch. The GR-303 interfaces for integrating NGDLC with a local digital switch can vary in line capacity from 48 lines to 2,016 lines. The concentration allowed over these interfaces is variable and can be matched to the services being made available from the remote NGDLC site to allow the most economic concentration ratio consistent with the service being provided.

While there are many variables that impact the decision of which switch termination type to use for the interface between a remote NGDLC site and the local digital switch, generally the most economic configurations are provided by using GR-303 for sites with more than 150 lines in the three to five year planning period. TR-008 is used for smaller remote NGDLC sites.

Q. PLEASE SUMMARIZE YOUR DISCUSSION OF BELLSOUTH'S POSITION ON UNE LOOP DEPLOYMENT.

Α.

BellSouth has designed and deployed its UNE loop infrastructure in an economic and rational manner using sound engineering principles.

Accordingly, the Authority should approve the resulting cost calculations and rates as presented in the testimonies of Ms. Caldwell and Mr. Ruscilli.

### **XDSL Loops**

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Q. PLEASE DESCRIBE BELLSOUTH'S UNBUNDLED XDSL LOOP
 OFFERING.

Α. High Bit-Rate Digital Subscriber Line (HDSL) Compatible Loop: The requirements for this type of loop are that the end user must be served by a non-loaded copper pair, and the loop typically cannot be more than 12,000 feet long on 24 gauge copper wire. If 26 gauge copper wire is used, the limit is 9,000 feet or less. In either case, the loop may have up to 2,500 feet of bridged tap with no single bridged tap exceeding 2,000 feet. The technical characteristics of the loop are verified to ensure that the loop meets stringent industry standards for CSA transmission specifications to support HDSL services.

Asymmetrical Digital Subscriber Line (ADSL) Compatible Loop: This type of loop is provided over copper facilities according to the Revised Resistance Design (RRD) industry standards, which means that the loop may be up to 18,000 feet long and may have up to 6,000 feet of bridged tap which is inclusive of the loop length. This means that for every foot of bridged tap, the loop length is reduced by an equal amount. Therefore, an RRD loop that has 4,000 feet of bridged tap could be no longer than 14,000 feet.

Originally the ADSL compatible loop was designed to the same CSA

criteria as the HDSL capable loop. However, in response to requests from CLECs, the specification for the loop was changed to the RRD standards during the first guarter of 2000.

BellSouth developed both the HDSL capable loop and the ADSL capable loop in response to the FCC's 96-325 Order, and both loop types have been available to CLECs since the fourth quarter of 1996.

<u>Unbundled Copper Loop (UCL)</u> – This type of loop provides a "dry" copper pair (that is, without electronic devices) to an end user using the Resistance Design (RD) industry standard. This loop may be up to 18,000 feet long and may have up to 6,000 feet of bridged tap, which is <u>exclusive</u> of the loop length. This means the loop length is not reduced by the bridged tap amount. Therefore, in some cases, the loop length may be 18,000 feet long and have up to 6,000 feet of bridged tap. BellSouth cannot ensure that these loops will function properly for DSL service since their physical characteristics may exceed the maximum distance for some DSL services and equipment. However, BellSouth will ensure that these loops have electrical continuity and balance relative to the tip and ring conductors.

The UCL has been available to CLECs since the second quarter of 1999.

As an additional offering, BellSouth has recently developed a new variant of UCL, the UCL Long (UCL-L) unbundled loop which is a copper loop that is longer than 18,000 feet. Typically applied telephony standards dictate

that all copper loops longer than 18,000 feet be "loaded" to properly serve dial-tone or "plain old telephone service" (POTS) type customers. In order to transform such loops into "dry" or "clean" copper loops, the CLEC would need to use BellSouth's Unbundled Loop Modifications (ULM) service offering to have any load coils and/or bridged tap removed from these loops. BellSouth witness Mr. John Ruscilli addresses the issue of rates for ULM in his testimony.

#### Q. DOES BELLSOUTH OFFER ANY ADDITIONAL XDSL LOOPS?

A. BellSouth offers its Integrated Services Digital Network (ISDN)-capable loop, and Universal Digital Channel (UDC)-capable loop. These two loop types are not specifically categorized as xDSL-capable loops, but they may support the DSL service known as Integrated Services Digital Network Digital Subscriber Line (IDSL). BellSouth provisions its ISDN-capable loops according to applicable industry standards which means they may be provisioned over copper facilities or via a DLC system. These loops are also free of any load coils, but are not referred to as "clean copper loops" because they may be provisioned via DLC systems, which are completely compatible with ISDN service. The UDC loop is the same as the ISDN-capable loop but is provisioned differently in a manner that supports "data-only" ISDN that will better meet the needs of CLECs that want to deploy IDSL.

### Q. WHAT IMPACT DOES LOOP LENGTH AND/OR THE PARTICULAR DSL

### TECHNOLOGY HAVE ON THE LOOP COST?

A. The usefulness of BellSouth's unbundled loops for the provisioning of DSL services depends on a variety of factors, including the end user's distance from the serving wire center, as well as the length and gauge of the copper wire that serves the customer. Significantly, the same copper loops that are used to provide DSL services are also utilized to provide voice service to BellSouth's customers, as well as to other CLECs' customers.

BellSouth ensures that the unbundled loops it provides meet appropriate technical standards. As the FCC recognized: "[p]rovision of xDSL service is subject to a variety of important technical constraints. One is the length of the subscriber loop: ADSL, the most widely deployed xDSL-based service, generally requires loops of less than 18,000 feet using current technology. Another is the quality of the loop, which must be free of excessive bridged taps, loading coils, and other devices commonly used to aid in the provision of analog voice and data transmission, but which interfere with the provision of xDSL services. 'Conditioning' loops to remove those impediments, or constructing fiber-based digital loop carrier systems to overcome loop length difficulties, can be expensive." See Third Report and Order in CC Docket No. 98-147, rel. Dec. 9, 1999, ¶ 8, n. 9 ("Line Sharing" Order).

Q. PLEASE SUMMARIZE YOUR TESTIMONY ON THE PROVISIONING OF

1		XDSL SERVICES.
2		
3	A.	The cost of provisioning unbundled loops that CLECs use to provide xDSL
4		services is a function of both the loop length and the particular DSL
5		technology to be deployed. As a result, it is appropriate for the cost study
6		for xDSL-compatible loops submitted with the testimony of Ms. Caldwell to
7		recognize distinctions based on loop length for the particular DSL
8		technology to be deployed.
9		
10	Line	Sharing
11		
12	Q.	WHAT IS LINE SHARING?
13		
14	A.	In its Third Report and Order in CC Docket No. 98-147 and Fourth Report
15		and order in CC Docket No. 96-98, released December 9, 1999, the FCC
16		states that "[t]he provision of XDSL-based service by a competitive LEC
17		and voiceband service by an incumbent LEC on the same loop is
18		frequently called 'line sharing'." (Order at ¶4)
19		
20	Q.	WHAT TECHNOLOGIES DOES BELLSOUTH UTILIZE IN ITS
21		DEPLOYMENT OF LINE SHARING?
22		
23	A.	Line sharing requires that a non-loaded, 2-wire copper loop serve the end
24		user. A non-loaded loop is a copper loop with no load coils, low-pass
25		filters, range extenders, or similar devices. For central office based line

sharing, the CLEC's meet point is the collocation point of termination.

BellSouth will use jumpers to connect the CLEC's connector block to the splitter. The splitter will route the high frequency portion of the signal to the CLEC's xDSL equipment in its collocation space. The splitter directs (1) the voiceband signals through a pair of copper wires to the voice switch, and (2) the digital data traffic though another pair of copper wires to the xDSL equipment in the CLEC's collocation space that is, in turn, attached to the CLEC's network. For remote terminal (RT) based line sharing, the CLEC's meet point is the collocation point of termination at the remote terminal. BellSouth will use jumpers to connect the CLEC's connector block to the splitter. The splitter will route the high frequency portion of the circuit to the CLEC's xDSL equipment in its collocation space within the remote terminal.

Q. WHAT DEVICES USED ON UNBUNDLED LOOPS CAN CAUSE INTERFERENCE WITH DSL SERVICES?

18 A. There are three arrangements on many loops that permit or enhance
19 voice service but effectively prevent or interfere with the satisfactory
20 transmission of digital signals. Because these arrangements potentially
21 cause interference with DSL services, they are sometimes referred to as
22 "disturbers," which must be removed from local loops as needed to allow
23 line sharing.

Q. WHAT ARE THESE THREE "DISTURBERS", AND HOW DO THEY

### INTERFERE WITH THE TRANSMISSION OF DIGITAL SIGNALS?

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Α. 3 The three disturbers often referred to in the context of provisioning DSL 4 services are load coils, bridged tap, and repeaters. These devices were developed to permit or enhance service in the voice band frequency 5 6 range, typically 300 Hertz to 3,400 Hertz. However, their use often degrades successful transmission, particularly of digital signals, in the 7 frequency range above 20,000 Hertz, the range in which xDSL services 8 9 typically operate. Removing these devices typically restores the capability of a loop to accommodate services utilizing such high frequency ranges, a 10 process referred to as "conditioning." However, this conditioning may 11 render the loop incapable of providing satisfactory voice grade service. 12

13

14

Q. PLEASE DESCRIBE THE FUNCTION OF A LOAD COIL.

15

A. A load coil is an electrical inductance coil designed to improve
transmission of signals in the voice band, and is typically used to extend
the loop length over which acceptable voice grade transmission may be
achieved, normally loop lengths greater than 18,000 feet. The load coil
boosts or amplifies analog voice signals thus permitting their reception at
greater distances.

22

23

Q. HOW DOES A LOAD COIL INTERFERE WITH AN XDSL SIGNAL?

24

25

A. The load coil's electrical inductance changes the rate at which data is

transmitted through the loop such that the two xDSL modems at each end
of the loop do not effectively receive each others' transmissions.

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Q. PLEASE DESCRIBE THE FUNCTION OF A REPEATER.

5

6 Α. As the name implies, a repeater inserted into a loop receives a signal from one end of a loop, amplifies the signal, and then retransmits the signal to 7 the other end of the loop. This achieves the same general purpose as the 8 9 load coil describe above, namely, to extend the viable range of a loop beyond normal limits of approximately 18,000 feet. There are two types of 10 repeaters in common use throughout BellSouth's nine-state region. Voice 11 frequency repeaters, the most common, are designed to amplify the 12 analog signal carried in the voice frequency band of the loop. Digital 13 14 repeaters extend the useful range of loops used for digital services.

15

16

Q. HOW DOES A REPEATER INTERFERE WITH AN XDSL SIGNAL?

17

A. Voice frequency repeaters can distort a digital signal to the point that high
bit-rate error rates make the signal unusable. Digital repeaters may or
may not interfere with xDSL type services, but success is very dependent
upon the type of digital service being provisioned

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23

Q. PLEASE DESCRIBE THE FUNCTION OF A BRIDGED TAP.

24

25

A. A bridged tap is a metallic extension to a loop such that the same loop

1		appears at two separate service locations. Obviously, the loop can be
2		used at only one of the two service locations at a given time; however,
3		bridged tap is useful in increasing the efficiency of overall loop usage.
4		
5	Q.	HOW DOES A BRIDGED TAP INTERFERE WITH AN XDSL SIGNAL?
6		
7	A.	Bridged tap increases the inductance for the loop at both service
8		locations; thus the length of the bridged tap must be considered along with
9		the length of the loop to the service location.
10		
11	Q.	PLEASE SUMMARIZE YOUR TESTIMONY CONCERNING LINE
12		SHARING.
13		
14	A.	My testimony describes the means by which BellSouth provisions line
15		sharing, including the work that must be done to remove existing barriers
16		to line sharing in BellSouth's loops to permit a successful installation. The
17		Authority should approve the cost studies submitted by Ms. Caldwell with
18		her testimony that reflect the provisioning process I have described.
19		
20	Acce	ess to Sub-Loop Elements
21		
22	Q.	WHAT ARE SUB-LOOP ELEMENTS?
23		
24	A.	Sub-loop elements are the individual elements that make up the entire
25		loop that extends from the BellSouth central office to the demarcation

I		point between BeilSouth's network and the inside wire at the end user
2		customer's premises. BellSouth offers access to the following sub-loop
3		elements:
4		Unbundled Loop Feeder
5		Unbundled Loop Distribution
6		Unbundled Loop Concentration
7		<ul> <li>Unbundled Network Interface Device (NID)</li> </ul>
8		<ul> <li>Unbundled Intrabuilding Network Cable (UINC)</li> </ul>
9		<ul> <li>Unbundled Network Terminating Wire (UNTW)</li> </ul>
10		
11	Q.	PLEASE DISCUSS THE SUB-LOOP ELEMENT REFERRED TO AS
12		LOOP FEEDER.
13		
14	A.	In many cases BellSouth deploys a multiple circuit copper cable (for
15		example, a 1,200 pair cable) from its central office to a remote terminal or
16		cross-box located somewhere between the central office and the end
17		user's location. Each pair within this cable can be used to carry a single
18		voice conversation. This section of the loop is called the loop feeder.
19		Sometimes, loop feeder has been referred to as "the first mile" of the loop
20		in that it is the first section of cable leaving the BellSouth central office
21		headed towards a customer's premises. This loop feeder section may
22		also be provisioned using fiber optic cable.
23		
24		The copper pairs of the loop feeder are then individually cross-connected
25		to pairs in smaller cables called loop distribution. The loop distribution

cables then serve all the houses or businesses in a sub-section of one of the central office's serving areas.

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Q. PLEASE DESCRIBE THE SUB-LOOP ELEMENT REFERRED TO AS LOOP CONCENTRATION.

6

A. Loop concentration is equipment such as digital loop carrier equipment
used to concentrate the individual loop distribution pairs (which I discuss
below) onto digital transmission facilities such as DS-1 circuits in the loop
feeder facilities. Unbundled loop concentration allows a CLEC to digitize
and multiplex its loop distribution pairs (either its own or those it acquired
from BellSouth on an unbundled basis) onto digital facilities for
transmission to the BellSouth central office.

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Q. PLEASE DESCRIBE THE SUB-LOOP ELEMENT REFERRED TO AS LOOP DISTRIBUTION.

17

Α. Loop distribution facilities have been referred to as the "last mile" because 18 these are the facilities that go the "last mile" to the customer's premises. 19 The loop distribution cables are used to, in effect, "fan out" the availability 20 of the cable pairs and/or transmission channels, if DLC equipment is used, 21 from the loop feeder cables. In this regard, the cables one would see 22 within a sub-division are generally loop distribution cables. Between the 23 24 loop feeder cable and the loop distribution cable is a cabinet, above ground "hut", or below ground "controlled environment vault" within which 25

cross-connections and/or electronics are located. These structures have been variously described as the "Feeder/Distribution Interface", the "Serving Area Interface", the "Remote Terminal" or, in its most simplistic configuration a "cross-connect box" or simply "cross-box". Any of these terms can be used to refer to the function of connecting a copper cable pair or fiber optic facility in the loop feeder facilities to a copper cable pair in the loop distribution facilities. In the case of multi-story commercial buildings, the loop distribution facility eventually runs to the customer's building and is then connected to Intrabuilding Network Cable (INC) and/or Network Terminating Wire (NTW). In single family dwellings, a "drop wire" connects the entire loop to the device called the Network Interface Device (NID).

Q. PLEASE DESCRIBE THE SUB-LOOP ELEMENT REFERRED TO AS INTRABUILDING NETWORK CABLE (INC).

Α.

In multi-story buildings, and in some campus-type properties, INC is that part of BellSouth's loop facilities extending from a cross-connect terminal at, or close to, the entrance point of the distribution cable. INC is another sub-loop element that is located on the network side of the demarcation point between BellSouth's network and the inside wire at an end user customer's premises. INC in some cases is referred to as "riser cable." Although INC may in some cases connect directly to the NID, typically it connects to NTW in a wiring closet prior to final termination at the end user's NID.

loop to its final termination at the customer's NID. The NID establishes

the demarcation point between BellSouth's network and the inside wire at

23

24

the end user customer's premises. NTW, INC, loop distribution, loop concentration, and loop feeder are located on BellSouth's side of the demarcation point and, thus, comprise sub-loop elements of BellSouth's network.

Q. WHAT IS YOUR UNDERSTANDING OF THE FCC'S STATEMENT IN ITS
 THIRD REPORT AND ORDER AND FOURTH FUTHER NOTICE OF
 PROPOSED RULEMAKING, FCC 99-238, RELEASED NOVEMBER 5,
 1999 (UNE REMAND ORDER) THAT BELLSOUTH IS REQUIRED TO
 PROVIDE CLECS ACCESS TO ILEC-OWNED INSIDE WIRING, AND
 WHAT IS ITS IMPACT, IF ANY?

A. First, let me set out what the FCC stated. The FCC's UNE Remand Order at ¶210 states:

We clarify that "technically feasible points" would include a point near the customer premises, such as the point of interconnection between the drop and the distribution cable, the NID, or the MPOE. Such access would give competitors unbundled access to the inside wire sub-loop element, in cases where the incumbent owns and controls wire inside the customer premises. It would also include any FDI, whether the FDI is located at a cabinet, CEV, remote terminal, utility room in a multi-dwelling unit, or any other accessible terminal. (Emphasis added).

The FCC's Remand Order at Paragraph 169 describes more specifically "control" of inside wire as follows:

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Section 68.3 of our rules defines the demarcation point as that point on the loop where the telephone company's control of the wire ceases, and the subscriber's control (or, in the case of some multiunit premises, the landlord's control) of the wire begins. Thus, the demarcation point is defined by control; it is not a fixed location on the network, but rather a point where an incumbent's and a property owner's responsibilities meet. The demarcation point is often, but not always, located at the minimum point of entry (MPOE), which is the closest practicable point to where the wire crosses a property line or enters a building. In multiunit premises, there may be either a single demarcation point for the entire building or separate demarcation points for each tenant, located at any of several locations, depending on the date the inside wire was installed, the local carrier's reasonable and nondiscriminatory practices, and the property owner's preferences. Thus, depending on the circumstances, the demarcation point may be located either at the NID, outside the NID, or inside the NID.

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The above paragraphs from the UNE Remand Order demonstrate that the FCC intended to include in the unbundling of what it refers to as "inside wire" those facilities that exist today on the network side of the demarcation point, and which are included in BellSouth's Accounts and

Subsidiary Records Categories as Network Terminating Wire (NTW), and that which are defined in Part 32 of the Uniform System Of Accounting (USOA) as Intrabuilding Network Cable (INC). As defined in several previous FCC Orders, however, "inside wire" is located on the customer's side of the demarcation point and is under control of the end user or, in some cases, the property owner or the landlord. A CLEC should obtain access to the sub-loop elements NTW and INC from BellSouth in the same manner as it obtains access to any other unbundled network element. As to access to the inside wire on the customer's side of the demarcation point, such access should be obtained from the end user or from the building owner. BellSouth is not opposed to providing unbundled access to its sub-loop elements, however BellSouth has sought clarification from the FCC that its use of the term "inside wire" in this docket is not the same as that phrase has traditionally been used in describing facilities on the customer's side of the demarcation point.

Q. PLEASE EXPLAIN HOW BELLSOUTH PROVIDES CLECS WITH UNBUNDLED ACCESS TO SUB-LOOP ELEMENTS.

A. BellSouth offers access to all elements of its loop network through subloop unbundling offerings that comply with the FCC's UNE Remand Order
and FCC Rule 319(a). In keeping with the full intent of the FCC's UNE
Remand Order, BellSouth is, and has been, providing sub-loop unbundling
at technically feasible points of access.

In order to provide CLECs with access to unbundled sub-loop elements, BellSouth will construct a separate access terminal in proximity to BellSouth's terminal. The CLEC installs its own terminal in proximity to the access terminal. BellSouth then extends tie cables between its terminal and the access terminal. These tie cables are connected to the unbundled sub-loop elements the CLEC desires to acquire from BellSouth. The CLEC extends a tie cable from its terminal to the access terminal and thus the unbundled sub-loop elements. BellSouth believes that such access affords CLECs a meaningful opportunity to compete, while also maintaining network security and reliability.

Q. HAVE YOU PREPARED AN EXHIBIT TO ILLUSTRATE BELLSOUTH'S PROPOSAL REGARDING CLEC ACCESS TO UNBUNDLED SUB-LOOP ELEMENTS?

A. Yes. Exhibit WKM-1, which is attached to this testimony, contains three

(3) pages that I hope will aid in understanding this issue. Page 1 shows
the typical access to unbundled NTW in a "garden" apartment. The point
to be made here is that the access terminal is cross-connected by tie
cable pairs with the terminals of both BellSouth and the CLEC thus
allowing a CLEC access while preserving network reliability and security.
The access terminal in this scenario could also function as a single point
of interconnection (SPOI) for access to unbundled NTW (UNTW). Page 2

As used by the FCC in its UNE Remand Order, the term "SPOI" refers to a single point of interconnection at multi-unit premises that is suitable for use by multiple telecommunications carriers.

shows BellSouth's proposed form of access for a CLEC to the sub-loop element UINC. BellSouth proposes the use of an access terminal or connector block on the cross-connect panel that is cross-connected by tie cable with the terminals of both BellSouth and the CLEC. The cross-connect panel, which serves as the access terminal for UINC, could also serve as a SPOI for use by multiple carriers. Page 3 shows access to the sub-loop element Unbundled Loop Distribution.

## Q. WILL BELLSOUTH PROVIDE A CLEC WITH DIRECT ACCESS TO BELLSOUTH'S SUB-LOOP ELEMENTS?

Α. No. Such direct access would reduce network security and reliability, which the FCC found to be indicators that a given arrangement is not technically feasible. (First Report and Order in Docket 96-325, ¶ 203) The FCC requires that "each carrier must be able to retain responsibility for the management, control, and performance of its own network." (First Report and Order in Docket 96-325, ¶ 203) Direct access, if allowed, would render BellSouth incapable of managing and controlling its network in the provision of service to its and certain CLECs' end user customers. Therefore, due to concerns about network reliability and security, BellSouth believes that direct access to its network facilities by CLECs is not in the best interests of end user customers, whether they are end user customers of BellSouth or of the CLECs. 

While I am in no way disparaging CLECs' technicians, with direct access it

is possible for the CLECs' technicians to intentionally or unintentionally disrupt BellSouth's end user's service as well as the service of CLECs using unbundled loops or unbundled sub-loop elements acquired from BellSouth. That simply presents an unnecessary risk.

Further, with direct access, BellSouth would be at the CLECs' mercy to tell BellSouth how, where, and when the CLEC has used BellSouth's facilities. This would unnecessarily complicate the maintenance of inventory records. Indeed, how could BellSouth ever have an accurate record of its facilities if every CLEC in the state had direct access to these facilities? Of course, the lack of accurate inventory information would result in provisioning and repair of customer service becoming more error prone. I do want to be perfectly clear about this. What we are talking about here, is allowing technicians from any and every CLEC in Tennessee to walk into an equipment room in a high rise building and start appropriating pairs and facilities for its own use, without consulting with anyone and without any obligation to keep appropriate records so that the next person in the room knows what belongs to whom. It doesn't take much imagination to know what a disaster this would end up being for BellSouth and for the customers in the building in question.

Q. HAVE ANY STATE UTILITY COMMISSIONS ADDRESSED THE ISSUE OF CLEC ACCESS TO BELLSOUTH'S SUB-LOOP ELEMENTS?

A. Yes. The Florida Public Service Commission (FPSC) considered the

issue of access to the sub-loop element UNTW in the arbitration proceedings between BellSouth and MediaOne in Docket No. 990149-TP. Also, the Georgia Public Service Commission (GPSC) considered this same issue of access to UNTW in the arbitration proceedings between BellSouth and MediaOne in Docket No. 10418-U.

The FPSC denied direct access to UNTW and required an access terminal to be placed between BellSouth's network and MediaOne's network. The access terminal gives CLECs the access to UNTW they desire without reducing network reliability and security. The FPSC determined that MediaOne and others could gain access to UNTW without reducing network security and reliability by adopting BellSouth's proposed form of access. A portion of that Order follows:

The record does not contain evidence of any case which would support a proposal where one party is seeking to use its own personnel to, in effect, modify the configuration of another party's network without the owning party being present. We find that MediaOne's proposal to physically separate BellSouth's NTW cross-connect facility from BellSouth's outside distribution cross-connect facilities is an unrealistic approach for meeting its objectives. Therefore, BellSouth is perfectly within its rights to not allow MediaOne technicians to modify BellSouth's network.

...Based on the evidence presented at the hearing, we believe that

it is in the best interests of the parties that the physical interconnection of MediaOne's network be achieved as proposed by BellSouth.

We find from the record that at least one other CLEC in Florida and an unknown number of CLECs in other states have been able to provide service based on BellSouth's NTW proposal. Thus, we believe that MediaOne should be able to provide service using BellSouth's NTW proposal... (FPSC in MediaOne Docket No. 990149-TP.)

The Georgia Commission likewise found that MediaOne should gain access through the use of an access terminal and BellSouth's facilities. In its Order, the Commission stated:

As stated in the prior section, to the extent there is not currently a single point of interconnection that can be feasibly accessed by MediaOne, consistent with the FCC's Third Report and Order, BellSouth must construct a single point of interconnection that will be fully accessible and suitable for use by multiple carriers. Such single points of interconnection shall be constructed consistent with MediaOne's proposal such that MediaOne shall provide its own cross connect (CSX) facility in the wiring closet to connect from the building back to its network. MediaOne would then be able to connect its customers within the MDU [that is, the Multiple Dwelling

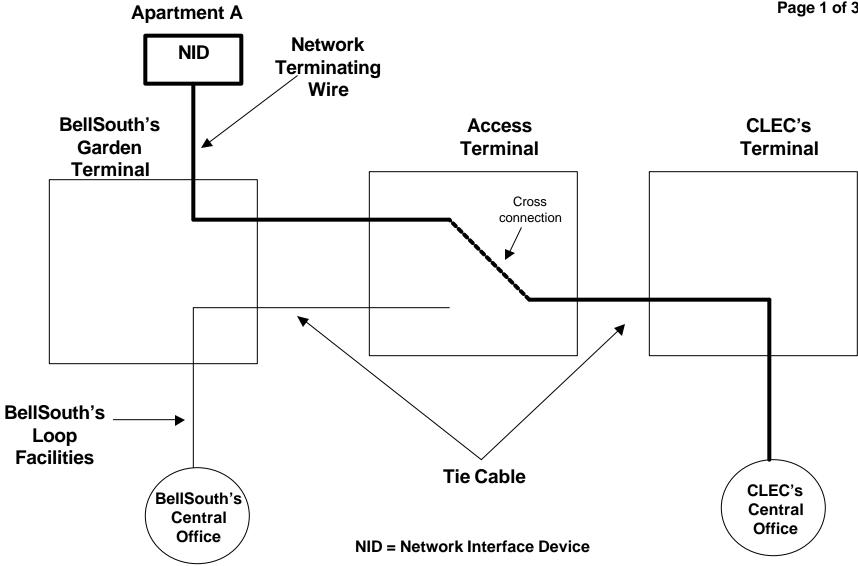
1		Unit] by means of an 'access CSX'. (GPSC in MediaOne Docket
2		No. 10418-U.)
3		
4	Q.	WHAT DOES BELLSOUTH WANT THE AUTHORITY TO DO WITH
5		REGARD TO THE ISSUE OF ACCESS TO THE SUB-LOOP ELEMENTS
6		YOU HAVE DESCRIBED?
7		
8	A.	BellSouth believes the use of access terminals gives CLECs access to
9		unbundled sub-loop elements while still maintaining network reliability and
10		security. Such access should apply to all sub-loop elements. Accordingly
11		the Authority should approve the cost studies and resulting rates
12		submitted with the testimonies of Ms. Caldwell and Mr. Ruscilli.
13		
14	Cust	omized Routing
15		
16	Q.	WHAT IS CUSTOMIZED ROUTING?
17		
18	A.	Customized routing (which has also been referred to as selective routing)
19		allows calls from CLEC customers served by a BellSouth switch to reach
20		the CLEC's choice of operator service or directory assistance service
21		platforms instead of BellSouth's operator service and directory assistance
22		service platforms. Customized routing can be provided when a CLEC
23		acquires unbundled local switching from BellSouth or resells BellSouth's
24		local exchange services.

1	Q.	BRIEFLY DESCRIBE THE METHODS AVAILABLE FOR CUSTOMIZED
2		ROUTING.
3		
4	A.	The first method of providing customized routing that BellSouth has made
5		available is the Line Class Code (LCC) method. Availability of customized
6		routing capability using LCCs is offered on a first-come, first-served basis.
7		To date, BellSouth has not denied any request for selective routing based
8		on lack of LCC capacity.
9		
10	Q.	WHAT IS THE SECOND METHOD BY WHICH BELLSOUTH PROVIDES
11		CUSTOMIZED ROUTING?
12		
13	A.	The second method for providing customized routing is through the use of
14		BellSouth's Advanced Intelligent Network (AIN) platform. A technical trial
15		of customized routing using BellSouth's AIN platform commenced in
16		Louisiana, in August 1998, and was successfully completed in September
17		1998. A second trial commenced from May 1999 and successfully
18		completed in August 1999.
19		
20		BellSouth has completed work on enhancements to its AIN Service
21		Management System (SMS) which will facilitate CLECs' ability to create
22		and update routing information for the CLECs' end users. BellSouth
23		recently completed end-to-end testing (ETET) of this enhancement.
24		
25		By providing CLECs a choice of customized routing methods, BellSouth

1		better enables CLECs to compete based upon their own business plans
2		and priorities.
3		
4	Q.	PLEASE SUMMARIZE YOUR TESTIMONY WITH REGARD TO
5		CUSTOMIZED ROUTING.
6		
7	A.	BellSouth offers two methods by which CLECs may obtain customized
8		routing. Accordingly, the Authority should approve the cost studies and
9		resulting rates for the AIN method as submitted in the testimonies of Ms.
10		Caldwell and Mr. Ruscilli. The Authority has previously approved the rates
11		for the Line Class Code method.
12		
13	Q.	DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?
14		
15	A.	Yes.

## Typical access to unbundled network terminating wire in "garden" apartment

BellSouth Telecommunications, Inc.
Tennessee Regulatory Authority
Docket Number 00-00544
Exhibit WKM-1
Page 1 of 3



#### BellSouth's proposed form of access BellSouth Telecommunications, Inc. **Tennessee Regulatory Authority** Inside Wire Docket Number 00-00544 Telephone Set Network Interface Device (NID) **Exhibit WKM-1** Page 2 of 3 Network Terminating Wire (NTW) **Fourth** Floor Wiring closet (May include access terminal for Unbundled NTW Access) Third Intrabuilding Network Cable Floor ("Riser Cable") Second Floor **Cross-Connect** Panel BellSouth's terminal for First **INC** access Floor **BellSouth** Loop **BellSouth Facilities Basement** Central Office CLEC's CLEC's terminal **Loop Facilities** Tie cable

BellSouth Telecommunications, Inc. **Access to the Sub-loop Element Loop Distribution Tennessee Regulatory Authority** Docket Number 00-00544 **Exhibit WKM-1** Page 3 of 3 **BellSouth End Loop Distribution** User(s) Connector **CLEC Terminal** block **BellSouth** To CLEC **Feeder Distribution** central office Interface or ("Cross-box") equipment Loop Feeder To BellSouth central office

#### **AFFIDAVIT**

STATE OF: Georgia COUNTY OF: Fulton

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared W. Keith Milner – Senior Director – Interconnection Services, BellSouth Telecommunications, Inc., who, being by me first duly sworn deposed and said that:

He is appearing as a witness before the Tennessee Regulatory Authority in Docket No. 00-00544 on behalf of BellSouth Telecommunications, Inc., and if present before the Authority and duly sworn, his testimony would be set forth in the annexed testimony consisting of 3 pages and exhibit(s).

W. Keith Milner

Sworn to and subscribed before me on ///0/0

NOTARY BUBLIC

1		BELLSOUTH TELECOMMUNICATIONS, INC.
2		TESTIMONY OF RONALD M. PATE
3		BEFORE THE TENNESSEE REGULATORY AUTHORITY
4		DOCKET NO. 00-00544
5		November 13, 2000
6		
7	Q.	PLEASE STATE YOUR NAME, YOUR POSITION WITH BELLSOUTH
8		TELECOMMUNICATIONS, INC. AND YOUR BUSINESS ADDRESS.
9		
10	A.	My name is Ronald M. Pate. I am employed by BellSouth
11		Telecommunications, Inc. ("BellSouth") as a Director, Interconnection
12		Services. In this position, I handle certain issues related to local
13		interconnection matters, primarily operations support systems ("OSS").
14		My business address is 675 West Peachtree Street, Atlanta, Georgia
15		30375.
16		
17	Q.	PLEASE SUMMARIZE YOUR BACKGROUND AND EXPERIENCE.
18		
19	A.	I graduated from Georgia Institute of Technology in Atlanta, Georgia, in
20		1973, with a Bachelor of Science Degree. In 1984, I received a Masters of
21		Business Administration from Georgia State University. My professional
22		career spans over twenty-five years of general management experience in
23		operations, logistics management, human resources, sales and marketing.

1		I joined BellSouth in 1987, and have held various positions of increasing
2		responsibility.
3		
4	Q.	HAVE YOU TESTIFIED PREVIOUSLY?
5		
6	A.	I have testified before the Public Service Commissions in Alabama,
7		Florida, Georgia, Louisiana, South Carolina, the Tennessee Regulatory
8		Authority and the North Carolina Utilities Commission.
9		
10	Q.	WHAT IS THE PURPOSE OF YOUR TESTIMONY?
11		
12	Α	The purpose of my testimony is to address the FCC'S Third Report And
13		Order And Fourth Further Notice Of Proposed Rulemaking In CC Docket
14		96-98 (FCC 99-238); Released November 5, 1999, (UNE Remand Order)
15		as its relates to BellSouth's OSS including a new requirement that
16		BellSouth must provide Competitive Local Exchange Carriers (CLECs)
17		access to loop make-up data via BellSouth's OSS. Additionally, I will
18		address BellSouth's OSS solution to satisfy the FCC's Third Report and
19		Order in CC Docket No. 98-147 and Fourth Report and Order in CC
20		Docket No. 96-98, released December 9, 1999 (Line Sharing Order)
21		requiring that incumbent LECs unbundle the high frequency portion of the
22		loop to permit the CLECs to provide xDSL-based service by sharing the
23		lines with the incumbent's voiceband service.

	4	
•		

2 Q. DOES BELLSOUTH PROVIDE CLECS NONDISCRIMINATORY

3 ACCESS TO ITS OSS?

Yes. BellSouth provides CLECs nondiscriminatory access to its OSS
 functions for pre-ordering, ordering, provisioning, maintenance and repair,
 and billing through robust and reliable manual and electronic interfaces.
 BellSouth's OSS interfaces for CLECs are operated and available on a
 nine-state regional basis in BellSouth's serving areas, including those in
 Tennessee. These interfaces allow CLECs the same pre-ordering and

Α.

Q. DID THE FCC CHANGE ITS DEFINITION OF OSS IN THE UNE REMAND ORDER?

ordering functions that BellSouth provides to itself.

No. Specifically, the FCC defined OSS as consisting of pre-ordering, ordering, provisioning, maintenance and repair, and billing functions supported by an incumbent LEC's database and information. Further, it stated "We find no reason to modify our definition of OSS." The FCC clarified that the pre-ordering function includes access to loop qualification information. Loop qualification information identifies the physical attributes of the loop plant (such as loop length, the presence of analog load coils and bridge taps, and the presence and type of Digital Loop Carrier) that

<sup>&</sup>lt;sup>1</sup> FCC 99-238 paragraph 425

1		enable carriers to determine whether the loop is capable of supporting
2		xDSL and other advanced technologies. <sup>2</sup> In summary, the FCC did not
3		redefine OSS, rather it clarified the pre-ordering function to include access
4 5		to loop qualification information.
6	Q.	DID THE FCC'S UNE REMAND ORDER IMPACT BELLSOUTH'S OSS
7		AS THESE OSS ARE USED BY CLECS?
8		
9	A.	The UNE Remand Order did not impact the existing CLEC OSS access
10		offered by BellSouth other than to specify at paragraph 426 that "the pre-
11		ordering function includes access to loop qualification [make-up]
12		information."
13		
14	Q.	WHAT IS BELLSOUTH'S RESPONSE TO THE FCC'S REQUIREMENT
15		THAT LOOP MAKE-UP INFORMATION BE AVAILABLE TO CLECS AS
16		PART OF THE PRE-ORDERING FUNCTION?
17		
18	A.	BellSouth has developed and implemented procedures to provide CLECs
19		with detailed loop make-up information via the manual Service Inquiry (SI)
20		process. Additionally, BellSouth has under development a detailed

22

mechanized Loop Make-up pre-order process that is accessible through

all current electronic interfaces that support pre-order functions (LENS,

<sup>&</sup>lt;sup>2</sup> FCC 99-238 paragraph 426

TAG, and RoboTAG®). This process will be available to any CLEC that is interested in incorporating these procedures into its interconnection agreement. BellSouth witnesses Ms. Caldwell and Mr. Ruscilli address the costs and BellSouth's proposed rates associated with the work required to incorporate this process into the pre-ordering function.

#### Q. PLEASE DESCRIBE THE MANUAL LOOP MAKE-UP SI PROCESS.

Α.

The loop make-up data is defined as the physical characteristics of the loop facilities beginning at the BellSouth central office. The data is listed in sequential order, and ends at the serving distribution terminal. Loop make-up data consists of such information as cable gauge and length, bridged taps, load coils, presence of Digital Loop Carrier ("DLC"), and other equipment that is part of local loop facilities.

The CLEC completes the "Customer Information" section of the Loop
Make-up SI form indicating if it wants the loop make-up by telephone
number, circuit identifier or address. The CLEC submits the Loop Makeup SI form to the Complex Resale Services Group ("CRSG") or their
Account Team. The CRSG/Account Team forwards the SI form to
BellSouth's Outside Plant Engineering Service Advocacy Center ("SAC").
The SAC verifies the availability of loop facilities. If the Loop Make-up SI
indicates the CLEC wants the make-up by telephone number or circuit

identifier, the SAC will return a specific make-up for the requested telephone number or circuit identifier. If the Loop Make-up SI indicates the CLEC wants the make-up by address, the SAC will return a specific make-up for the requested address.

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The SAC will supply make-up for either a suitable copper pair(s) and DLC pairs as requested by the CLEC for the requested address, telephone number or circuit identifier. If either a copper pair, or DLC, but not both exists at that address/telephone number/circuit identifier, the SAC will indicate in the "Comments Section" which is not available at the requested address/telephone number/circuit identifier. The following is an example comment for an existing DLC make-up where a copper pair does not exist: "Provided DLC make-up at above address, no copper pairs exist at this location". Again, the loop make-up will be listed in sequential order starting at the central office and ending at the end user terminal. The SAC will return the completed Loop Make-up SI to the CRSG/Account Team. The CRSG/Account Team reviews the SI form for completeness and forwards the loop make-up data to the CLEC via electronic mail. They also forward the information to the Local Carrier Service Center ("LCSC") for bill preparation. The LCSC provides a Firm Order Confirmation ("FOC") to the CLEC and generates a service order that automatically completes for billing the service.

23

1	Q.	IS THE MANUAL LOOP MAKE-UP SERVICE INQUIRY MERELY AN
2		INTERIM PROCESS UNTIL ELECTRONIC ACCESS IS AVAILABLE?
3		
4	A.	No. The manual Loop Make-up ("LMU") SI process will continue to be a
5		means for obtaining loop make-up information, even after the electronic
6		Loop Make-up SI process is available. CLECs may obtain documentation
7		for the current Unbundled Network Element ("UNE") pre-ordering and
8		ordering information pertaining to BellSouth's manual loop make-up at
9		BellSouth's Website:
10		http://www.interconnection.bellsouth.com/guides/bpobr.html.
11		
12	Q.	CAN YOU ESTIMATE THE QUANTITY OF BELLSOUTH LOOPS THAT
13		HAVE DETAILED LOOP INFORMATION POPULATED WITHIN LFACS
14		THEREBY REDUCING THE NEED FOR A MANUAL SI?
15		
16	A.	While 100% of BellSouth's loops are populated in LFACS with certain
17		basic information, not all will have the detailed loop make-up information.
18		However, in the high-populated metropolitan areas where the marketing
19		efforts of CLECs are most likely to be concentrated, it is approximated that
20		as much as 80% of loops with detailed loop make-up information are
21		populated in LFACS. So it is only for that remaining small percentage of
22		loops that the manual SI process may have to be utilized. And whenever
23		CLECs must use the manual SI process for these remaining loops,

BellSouth will load the resulting loop make-up information in LFACS for future queries.

Q.

Α.

PLEASE DISCUSS THE MEANS BELLSOUTH HAS DEVELOPED TO PROVIDE CLECS WITH ELECTRONIC ACCESS TO LOOP MAKE-UP INFORMATION AND ELECTRONIC ORDERING OF xDSL LOOPS?

BellSouth is developing a comprehensive electronic process for preordering and ordering for CLECs via the Telecommunications Access Gateway ("TAG"), RoboTAG<sup>TM</sup> and Local Exchange Navigation System ("LENS"). It provides electronic access to loop make-up information from the Loop Facilities Assignment and Control System ("LFACS") and electronic ordering of xDSL loops.

BellSouth will also be enhancing the Electronic Data Interchange ("EDI") to provide electronic ordering of xDSL loops. These enhancements are currently in beta testing with selected CLECs. Interested CLECs will need to conduct System Readiness Testing ("SRT") with BellSouth prior to using these new functions when available for production. If they have not done so already, CLECs must also upgrade their TAG interface to the TCIF 9.0 version in order to test the new functions and then be able to use them in production. CLECs may obtain information on the manual and electronic ordering of BellSouth Loop Make-up at the BellSouth Website:

1		http://interconnection.bellsouth.com/products/UNE/bstlmu.pdf.
2		
3	Q.	PLEASE DESCRIBE BELLSOUTH'S LOOP QUALIFICATION SYSTEM
4		("LQS") AND ITS PURPOSE IN SUPPORTING BELLSOUTH'S DSL
5		PRODUCT.
6		
7	A.	LQS stands for Loop Qualification System. LQS was designed as a tool
8		for Network Service Providers, the purchasers of BellSouth's tariffed
9		industrial class ADSL offering to determine whether a particular service
10		location is qualified for BellSouth's industrial class ADSL offering based on
11		BellSouth's defined technical parameters. In other words, by entering a
12		telephone number or circuit identifier, LQS provides the user with a
13		qualified "yes/no" response based on the technical parameters of
14		BellSouth's industrial class ADSL offering only. LQS does not provide
15		loop make-up information as contemplated by the FCC's UNE Remand
16		Order.
17		
18	Q.	DOES BELLSOUTH PROVIDE CLECs ACCESS TO LQS?
19		
20	A.	Yes. Subsequent to the FCC's UNE Remand Order, LQS was made
21		available for use by CLECs on an interim basis until the mechanized loop
22		make-up interface is deployed. However, the purpose of LQS did not
23		change with making this access to CLECs available - it remains a tool to

1		provide a response to the inquirer if the location is qualified for BellSouth's
2		ADSL service. Lastly, LQS does not provide the level of detailed
3		information in order that a CLEC may make an independent judgment
4		about whether the loop is capable of supporting advanced services
5		equipment the CLEC intends to install.
6		
7	Q.	HOW DOES A CLEC OBTAIN ACCESS TO LQS?
8		
9	A.	A CLEC may contact its BellSouth account team to obtain information on
10		gaining access to LQS. The account team will assist with the appropriate
11		documentation necessary to obtain a password and resulting access to
12		LQS. CLECs may obtain a Loop Qualification System ("LQS")
13		DLEC/CLEC Job Aid via the BellSouth Website:
14		http://www.interconnection.bellsouth.com/guides/bpobr.html
15		
16	Q.	DOES BELLSOUTH'S BUSINESS-CLASS ADSL UTILIZE LQS?
17		
18	A.	Yes. BellSouth's business class ADSL, sold from the FCC Tariff No.1 and
19		intended primarily for business applications, utilizes LQS as a "screening
20		function" to determine if a manual SI and subsequent manual loop make-
21		up is required. In those instances that LQS provides a response that the
22		loop under review will meet the required data speed, BellSouth will begin

its order, design and provisioning phase, without involving the SI process.

1		In the remaining instances, where the response indicates that the loop
2		under review will not perform at the required data speeds, BellSouth
3		utilizes the manual SI and subsequent loop make-up to obtain exact loop
4		make-up information.
5		
6	Q.	YOU HAVE REFERRED TO BOTH BELLSOUTH BUSINESS CLASS
7		ADSL AND INDUSTRIAL CLASS ADSL. PLEASE DIFFERENTIATE.
8		
9	A.	My reference to BellSouth's business class ADSL is describing a high-
10		speed service with data rates of:
11		• 384 Kbps x 384 Kbps
12		• 768 Kbps x 512 Kbps
13		• 1.5 – 1.8 Mbps x 512 - 768 Kbps
14		• 2 – 4 Mbps x 640 – 896 Kbps
15		● 4 – 6 Mbps x 640 – 896 Kbps
16		• 192 Kbps x 192 Kbps.
17		
18		The business class offering will provide guaranteed performance levels to
19		provide a desired class of service including symmetric and asymmetric
20		data rates. The BellSouth business class ADSL is comparable to UCLs
21		CLECs will be ordering.
22		

1		My reference to BellSouth's industrial class ADSL is describing a
2		comparatively lower speed service, downstream data rate up to 1.5 Mbps
3		and upstream data rate up to 256 Kbps. The cost structure for this
4		offering does not support special actions by BellSouth to either condition
5		an existing loop or to provide a new loop in order to make ADSL work at a
6		given location. The 1.5 Mbps x 256 Kbps offering, referred to as industrial
7		service, is a "best effort", low cost, mass market offering.
8		
9	Q.	WHAT IS THE SOURCE OF THE LOOP INFORMATION CONTAINED
10		WITHIN LQS?
11		
12	A.	The database of record for loop make-up information is LFACS. Thus, the
13		source of loop information in LQS is LFACS. However, LQS also utilizes
14		the additional software systems described below:
15		
16		Loop Engineering Information System ("LEIS") - An umbrella system
17		with several modules, one of which is LEAD.
18		
19		Loop Engineering Assignment Data ("LEAD") - LEAD is a snapshot of
20		the LFACS database. It receives current data once a month for all wire
21		centers.
22		

1	•	Hands-Off Assignment Logic - ("HAL") HAL is a BellSouth developed
2		software system designed to pull information from LFACS and join
3		transactions that can not be performed by LFACS, including
4		assignment of most service orders, among which includes some
5		assignments on ADSL facilities.

Q. IS DIRECT ACCESS TO LFACS OR LEIS/LEAD REQUIRED IN ORDER
TO PROVIDE CLECS WITH DETAILED INFORMATION ABOUT THE
LOOP?

11 A. No. BellSouth's obligation is to provide requesting carriers the same

12 underlying information that BellSouth has in any of its own databases or

13 other internal records<sup>1</sup>. BellSouth's mechanized OSS interface and

14 manual interface provides a means to submit either a mechanized LMU

15 pre-order query or a manual LMU Service Inquiry ("SI") to LFACS and

16 receive a response. In the case of LEIS/LEAD, access may be obtained

17 by CLECs for LQS, which provides a "yes/no" qualified response.

Q. COULD I NOW ASK YOU TO ADDRESS LINE SHARING? HOW HAS THE FCC DEFINED LINE SHARING?

<sup>&</sup>lt;sup>1</sup> CC Docket 96-68, Paragraph 427, Page 193, released November 5, 1999

Α. In its Third Report and Order in CC Docket No. 98-147 and Fourth Report and Order in CC Docket No. 96-98, released December 9, 1999, page 10, paragraph 13, the FCC adopted the requirement that incumbent LECs "unbundle the high frequency portion of the loop to permit competitive LECs to provide xDSL-based services by sharing lines with the incumbent's voiceband services." Additionally, on page 12, paragraph 17 of the same order, the FCC described Line Sharing generally as "the ability of two different service providers to offer two services over the same line, with each provider employing different frequencies to transport voice or data over that line."

Q. PLEASE DESCRIBE BELLSOUTH'S APPROACH TO DEVELOPING
OSS FUNCTIONALITY THAT WILL ELECTRONICALLY PROCESS
CLEC XDSL AND LINE SHARING SERVICE REQUESTS.

Α.

BellSouth is implementing a vendor solution provided by Telcordia

Technologies, Inc. to provide the OSS necessary for the pre-ordering,
ordering and provisioning of CLEC xDSL compatible loops and Line

Sharing. This extensive technical solution provides Pre-Existing Licensed
Software and Marketable Licensed Software and Services to integrate

Licensed Software for UNE Remand CLEC xDSL and Line Sharing into
BellSouth's operations environment. As an example, the solution includes
the establishment of a new corporate gateway along with a new system

1 architecture for the processing of Local Service Requests ("LSRs") for the 2 UNE Remand and Line Sharing Orders. 3 4 The Corporate gateway establishes a single entry point for processing of 5 xDSL requests. It provides a flexible and expandable independent 6 gateway that has security, logging and mapping capabilities, 7 The Corporate gateway is configured to provide Common Object Request Broker Architecture ("CORBA") interfaces for the TAG client APIs from 8 9 the CLECs and an interface for BellSouth's OSS. 10 This allows pre-ordering and ordering functionality utilizing BellSouth's 11 LENS, TAG, and Robo®Tag electronic interfaces. It also provides a 12 navigator interface for the Local Service Requests Router ("LSRR"), which 13 permits firm ordering functionality utilizing the BellSouth EDI electronic 14 interface. 15 16 The new system architecture known as Delivery Order Manager will 17 automate many of the service requests functions. Delivery Order 18 Manager can be described as a work flow sequencing and control 19 "engine" that works with partner applications to accept and process 20 service requests. Delivery Order Manager will manage the access to all 21 the databases needed to process a request. Some commonly known 22 databases for pre-order and order functionality are CRIS, CABS, RSAG, 23 ATLAS, and P/SIMS. In addition, Delivery Order Manager will access

1		LFACS for queries for loop make-up information. Delivery Order Manager
2		also interfaces with a new Service Order Generator for mechanized
3		service order creation allowing flow through of the requests to BellSouth's
4		Service Order Communications System ("SOCS"). In addition to the
5		software requirements and associated software Right-To-Use ("RTU")
6		fees, the Telcordia provided solution also provides support services.
7		Support services include such items as:
8		<ul> <li>Platform planning and support</li> </ul>
9		<ul> <li>Installation and system administration support</li> </ul>
10		Services integration testing
11		Training and documentation
12		
13	Q.	IS THE SCOPE OF WORK THAT IS TO BE PROVIDED BY TELCORDIA
14		EXCLUSIVELY FOR CLEC OSS CAPABILITIES ASSOCIATED WITH
15		THE UNE AND LINE SHARING ORDERS?
16		
17	A.	No. The majority of the work done in this effort is for OSS capabilities
18		associated with UNE Remand and Line Sharing orders, however,
19		Telcordia is performing additional work on Electronic Access Ordering
20		("EAO") functionality. EAO will provide ASR pre-order functionality for
21		address validations and Connecting Facility Assignment ("CFA") inquiries.
22		Approximately \$3.2 million is committed for licensed software Right-to-Use
23		fees for EAO.

1		
2	Q.	WHAT IS THE CURRENT VALUE OF THE SOFTWARE AND SERVICES
3		SCOPE OF WORK THAT WILL BE PERFORMED BY TELCORDIA FOR
4		BELLSOUTH IN THE UNE REMAND FOR XDSL AND LINE SHARING
5		EFFORT?
6		
7	A.	The software and service fees total approximately \$69,500,000 for the
8		UNE Remand for xDSL and Line Sharing software and services provided
9		by Telcordia Technologies, Inc. This includes approximately \$28,500,000
10		for UNE Remand for CLEC xDSL (including 3 change notices) and
11		approximately \$41,000,000 for Line Sharing. This does not include the
12		approximate \$3,200,000 for software fees described previously for EAO
13		functionality.
14		
15	Q.	PLEASE SUMMARIZE THE BENEFITS OF THE TELCORDIA SOLUTION
16		FOR XDSL AND LINE SHARING TO BELLSOUTH AND ITS CLEC
17		CUSTOMERS.
18		
19	A.	The Telcordia solution offers xDSL pre-ordering functionality utilizing
20		BellSouth's LENS, TAG, and Robo®Tag electronic interfaces. It provides
21		firm order functionality utilizing BellSouth's LENS, TAG, RoboTAG®, and
22		EDI electronic interfaces. A navigator interface for the Local Service
23		Requests Router ("LSRR") permits ordering functionality utilizing the

BellSouth EDI electronic interface. The mechanized LMU may be requested using multiple types of queries (i.e. by working telephone number, by working circuit identifier, query by spare facility at an address, query and reserve spare facility, and cancellation of a reservation). The Telcordia solution offers electronic processing of Line Sharing service requests allowing flow-through within BellSouth's OSS. Important benefits also include the ability to inventory and assign BellSouth facilities and splitters at the pre-specified CLEC meet points. These capabilities provided by the Telcordia solution translate into reliable, fast and accurate processing of CLEC xDSL and Line Sharing service requests. It provides state-of-the-art technology with the ability to process the anticipated volumes of requests in a cost-effective manner and to build future applications and functionalities.

Q. BASED ON CURRENT PLANS, WHEN WILL ELECTRONIC PREORDER AND ORDERING CAPABILITIES BE AVAILABLE UNDER THE
TELCORDIA SOLUTION?

Α

BellSouth currently has the pre-ordering functionality which includes loop make-up and the xDSL compatible loop firm order functionality in a Beta testing environment. The pre-ordering functionality for xDSL is targeted for deployment into the production environment in mid-to-late November 2000. Some defects for the ordering functionality discovered during Beta

testing still remain. BellSouth is working with Telcordia to establish dates when the defects will be corrected. As a result, the ordering functionality for xDSL will be delayed beyond the targeted November implementation date.

Firm Order Line Sharing based on the vendor solution provided by

Telcordia does not have a firm schedule established. In cooperation with
the CLEC Line Sharing collaborative teams, BellSouth has implemented a
an interim solution in the existing systems to allow mechanized firm
ordering of CO-based BellSouth-owned splitter Line Sharing. This
solution was implemented into the production environment on September
30, 2000. This interim solution is targeted to be supplemented and
replaced utilizing the Telcordia solution in mid-to-late 2001. BellSouth
plans to also offer mechanized firm order of CO-based CLEC owned
splitter Line Sharing and Remote Line Sharing. These products are being
developed jointly in the Line Sharing Collaborative teams and will be
mechanized as they are developed.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

21 A. Yes. 22

\_\_

#### **AFFIDAVIT**

STATE OF: Georgia COUNTY OF: Fulton

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared Ronald M. Pate–Director – Interconnection Operations, BellSouth Telecommunications, Inc., who, being by me first duly sworn deposed and said that:

Ronald M. Pate

Sworn to and subscribed before me on /////

NOTARY PUBLIC

1	BELLSOUTH TELECOMMUNICATIONS, INC.
2	DIRECT TESTIMONY OF D. DAONNE CALDWELL
3	BEFORE THE TENNESSEE REGULATORY AUTHORITY
4	DOCKET NO. 00-00544
5	NOVEMBER 13, 2000
6	
7	Q. PLEASE STATE YOUR NAME, ADDRESS AND OCCUPATION.
8	
9	A. My name is D. Daonne Caldwell. My business address is 675 W.
10	Peachtree St., N.E., Atlanta, Georgia. I am a Director in the Finance
11	Department of BellSouth Telecommunications, Inc. (hereinafter referred to
12	as "BellSouth"). My area of responsibility relates to the development of
13	economic costs.
14	
15	Q. PLEASE PROVIDE A BRIEF DESCRIPTION OF YOUR EDUCATIONAL
16	BACKGROUND AND WORK EXPERIENCE.
17	
18	A. I attended the University of Mississippi, graduating with a Master of
19	Science Degree in mathematics. Additionally, I have attended numerous
20	Bell Communications Research, Inc. ("Bellcore") courses and outside
21	seminars relating to service cost studies and economic principles.
22	
23	My initial employment was with South Central Bell in 1976 in the Tupelo,
24	Mississippi, Engineering Department where I was responsible for Outside
25	Plant Planning. In 1983, I transferred to BellSouth Services, Inc. in

1 Birmingham, Alabama, and was responsible for the Centralized Results System Database. I moved to the Pricing and Economics Department in 2 1984 where I developed methodology for service cost studies until 1986 3 when I accepted a rotational assignment with Bellcore. While at Bellcore, I 4 was responsible for development and instruction of the Service Cost 5 6 Studies Curriculum including courses, such as, "Concepts of Service Cost Studies", "Network Service Costs", "Nonrecurring Costs", and "Cost 7 8 Studies for New Technologies". In 1990, I returned to BellSouth and was appointed to a position in the cost organization, now part of the Finance 9 10 Department, with the responsibility of managing the development of cost 11 studies for transport facilities, both loop and interoffice. My current responsibilities encompass cost methodology development and the overall 12 coordination of cost study and interrogatory response filings. Additionally, I 13 14 participate in cost-related dockets as an expert witness on cost issues.

15

#### Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

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16

A. The purpose of my testimony is to present and support the cost study results for the unbundled network elements ("UNEs") both those previously filed in this docket and for those attached to this testimony. Additionally, I describe the underlying cost methodology used in these studies. BellSouth witness, Mr. John Ruscilli, addresses the rates BellSouth is proposing that are based upon these costs.

24

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#### Q. WHY DID BELLSOUTH FILE COST STUDIES IN THIS DOCKET?

A. In its May 9, 2000 Director's Conference, the Tennessee Regulatory 2 Authority ("TRA") opened Docket No. 00-00544 and specified the elements 3 for which BellSouth needed to provide cost support; Intra-building Cable, 4 Network Terminating Wire and Line Sharing, such that permanent cost-5 based rates could be established. BellSouth fulfilled the TRA's directive 6 with a June 30, 2000 filing. Subsequently, the TRA expanded the scope of 7 8 this docket to include all elements that may be subject to arbitration as a result of the Federal Communications Commission's ("FCC's") Third 9 10 Report and Order. BellSouth filed additional cost support on October 2, 11 2000 with respect to these UNEs. The TRA also ordered that BellSouth allow competitors to purchase and install splitters in a line sharing 12 arrangement. BellSouth filed additional cost support in response to this 13 order on October 20, 2000. BellSouth also included cost support for 14 additional combinations in the October 20, 2000 filing. Additionally, 15 attached to this docket as Exhibit DDC-1 are revised nonrecurring costs for 16 xDSL loops, i.e., ADSL, HSDL, and unbundled copper loops ("UCLs"), 17 Loop Conditioning, and Loop Make-up. Also, revisions to some line 18 sharing nonrecurring costs have been made and additional elements have 19 been identified that are required for line sharing. Exhibit DDC-1 20 21 supercedes the nonrecurring costs that were filed previously for these 22 elements. A summary of the costs that changed from those previously filed is attached as Exhibit DDC-2. 23

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1	Q. PLEASE EXPLAIN WHY BELLSOUTH REVISED THE NONRECURRING
2	COSTS FOR XDSL LOOPS AND LINE SHARING.

A. The provisioning of xDSL and Line Sharing UNEs is an evolving process, such that BellSouth is constantly reviewing its projected time estimates and provisioning processes. Updates to work time estimates, work groups, and some underlying assumptions from the study filed previously in this docket are reflected in Exhibit DDC-1. As Exhibit DDC-2 reflects, the vast majority of the costs decreased. Exhibit DDC-3 outlines the changes that were made that impacted the cost results.

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# Q. WERE THE ELEMENTS FILED IN THIS DOCKET PREVIOUSLY SUBMITTED TO THE TENNESSEE REGULATORY AUTHORITY ("TRA") FOR REVIEW IN THE GENERIC DOCKET NO. 97-01262?

15

A. No. The elements submitted in this docket are the result of the Federal 16 Communications Commission's ("FCC's") Third Report and Order, in which 17 additional unbundled network elements ("UNEs") were defined. Thus, the 18 TRA was never given the opportunity to review these costs in Docket No. 19 97-01262 (the generic cost docket). However, let me emphasize that 20 BellSouth followed the methodology and inputs established by the TRA in 21 22 Docket No. 97-01262. I will expand on this statement later in my testimony. 23

24

#### 25 Q. WHAT TYPES OF COSTS ARE REFLECTED IN THE COST STUDY?

1 A. The cost study reflects both recurring and nonrecurring costs. Recurring costs include both capital and non-capital costs. Capital costs are 3 associated with the purchase of an item of plant, i.e., an investment. They 4 consist of depreciation, cost of money, and income tax. Non-capital 5 recurring costs are expenses associated with the use of an investment. 6 These operating expenses consist of plant-specific expenses, such as, 7 8 maintenance, ad valorem taxes and gross receipts taxes. 9 10 Nonrecurring costs are one-time expenses associated with provisioning, 11 installing and disconnecting the network capability. These costs generally include five major categories of activity: service inquiry, service order, 12 engineering, connect and test, and technician travel time. 13

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### Q. IS BELLSOUTH'S COST STUDY CONSISTENT WITH THE FCC's COSTING METHODOLOGY?

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18 A. Yes. BellSouth's cost methodology is not only compliant with the Act, but 19 also with the FCC's First Report and Order. BellSouth utilized the FCC's 20 published Total Element Long Run Incremental Cost ("TELRIC") 21 methodology as a guideline in producing cost support for unbundled 22 network elements. Thus, the costs are forward-looking and reflect an 23 efficient network design based on existing wire center locations.

24

1		Specifically, BellSouth's cost study is consistent with the FCC's costing
2		methodology as set forth in FCC Rule 51.505 (Forward-looking economic
3		cost) which defines the FCC's cost methodology for unbundled network
4		elements. Pursuant to the FCC's rules, such costs must be developed
5		using an efficient network configuration that uses the existing location of
6		the Incumbent Local Exchange Carrier's ("ILEC's") wire centers. Further,
7		the costs should be developed using a forward-looking cost of capital and
8		economic depreciation rates, and a reasonable allocation of forward-
9		looking common costs is appropriate. The forward-looking economic costs
10		may not include embedded costs, retail costs, opportunity costs or
11		revenues to subsidize other services.
12		
13	Q.	HAS THE IMPACT OF THE EIGHTH CIRCUIT COURT'S RECENT
13 14	Q.	HAS THE IMPACT OF THE EIGHTH CIRCUIT COURT'S RECENT DECISION BEEN REFLECTED IN BELLSOUTH'S COST
	Q.	
14 15	Q.	DECISION BEEN REFLECTED IN BELLSOUTH'S COST
14 15 16		DECISION BEEN REFLECTED IN BELLSOUTH'S COST
14		DECISION BEEN REFLECTED IN BELLSOUTH'S COST DEVELOPMENT?
14 15 16 17		DECISION BEEN REFLECTED IN BELLSOUTH'S COST DEVELOPMENT?  No. On July 18, 2000, the United States Court of Appeals for the Eighth
14 15 16 17		DECISION BEEN REFLECTED IN BELLSOUTH'S COST DEVELOPMENT?  No. On July 18, 2000, the United States Court of Appeals for the Eighth Circuit issued an opinion that struck down the FCC's TELRIC pricing rule.
114 115 116 117 118		DECISION BEEN REFLECTED IN BELLSOUTH'S COST DEVELOPMENT?  No. On July 18, 2000, the United States Court of Appeals for the Eighth Circuit issued an opinion that struck down the FCC's TELRIC pricing rule. The Court held that unbundled network element costs should be
114 115 116 117 118 119 220		DECISION BEEN REFLECTED IN BELLSOUTH'S COST DEVELOPMENT?  No. On July 18, 2000, the United States Court of Appeals for the Eighth Circuit issued an opinion that struck down the FCC's TELRIC pricing rule. The Court held that unbundled network element costs should be determined using forward-looking costs of the incumbent local exchange
114 115 116 117 118 119 220 221		DECISION BEEN REFLECTED IN BELLSOUTH'S COST DEVELOPMENT?  No. On July 18, 2000, the United States Court of Appeals for the Eighth Circuit issued an opinion that struck down the FCC's TELRIC pricing rule. The Court held that unbundled network element costs should be determined using forward-looking costs of the incumbent local exchange company's ("ILEC's") existing network rather than on the costs of a

cost methodology for UNEs; further, the full impact of that decision will not

be known until the appeal process is concluded. Therefore, BellSouth has 1 not made any changes to the underlying TELRIC methodology to reflect 2 the anticipated effect of the Eighth Circuit Court's decision. Thus, 3 BellSouth's costs are forward-looking, but are conservative (low) based on 4 the Eighth Circuit's opinion. Additionally, on September 25, 2000, the 5 Eighth Circuit granted a stay of the TELRIC decision stating that its 6 decision "is stayed pending the filing and ultimate disposition of a petition 7 8 for certiorari with the Supreme Court." Thus, the timing of the final ruling on the Eighth Circuit's decision is pending and BellSouth reserves its right 9 10 to revise its cost study once a final decision is reached with respect to this 11 litigation.

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## Q. WHAT COST METHODOLOGY WAS USED IN THE COST STUDY SUBMITTED IN THIS DOCKET?

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A. The cost study is based on the study methodology established by the TRA 16 in its Order in Docket No. 97-01262. The TRA's response to Issue 1 in the 17 Interim Order<sup>1</sup> established the cost methodology that should provide the 18 foundation for both the cost models and the inputs. Page 8 of the Interim 19 Order states: "The Authority finds that prices should be established using 20 the forward-looking economic cost methodology as defined by the FCC's 21 22 TELRIC methodology, including an appropriate markup for the recovery of shared and common costs. This methodology ensures that costs used to 23

24

<sup>&</sup>lt;sup>1</sup> Issue 1: What cost methodology should the TRA use in setting interconnection and Unbundled Network Elements ("UNE") prices?

2		an efficient firm using the least-cost technology." In establishing the
3		pricing standard as TELRIC economic cost, the TRA has also determined
4		that the TELRIC economic cost methodology should be followed for
5		developing the costs.
6		
7	Q.	PLEASE PROVIDE SOME BACKGROUND TO DOCKET NO. 97-01262.
8		
9	A.	BellSouth filed cost studies to support permanent prices for various
10		network elements that were contained in BellSouth's interconnection
11		agreements or for which the TRA had previously established interim rates.
12		The studies were filed electronically with complete documentation. With
13		these studies, BellSouth introduced a new cost model, the TELRIC
14		Calculator <sup>©</sup> . The TELRIC Calculator converts material prices and labor
15		work times to cost.
16		
17	Q.	ARE THE ADJUSTMENTS TO BELLSOUTH'S INPUTS ORDERED BY
18		THE TRA IN DOCKET NO. 97-01262 INCORPORATED IN THE COST
19		STUDY RESULTS PRESENTED IN THIS DOCKET?
20		
21	A.	Yes. The TRA-ordered inputs that are relevant to the cost elements in this
22		proceeding are included. For example, the cost study includes the TRA-
23		ordered cost of money, depreciation lives, and shared and common
24		
25		
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set prices for UNEs will reflect the inputs, quantities, and prices faced by

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1	factors.	
2		
3	Q. PLEASE ELABORATE ON THE TRA-ORDERED ADJUSTMENTS	
4	BELLSOUTH INCORPORATED IN THE COST STUDY TO FULFILL	
5	THE TRA'S INTERIM ORDER IN DOCKET NO. 97-01262.	
6		
7	A. I will address each of the adjustments included in this filing and reference	
8	the issue and the appropriate discussion from the TRA's Interim Order in	
9	Docket No. 97-01262. The cost studies submitted in this docket follow the	Э
10	intent of each TRA adjustment. Where appropriate, the inputs have been	
11	updated to reflect the study period, 2000-2002.	
12		
13	First, the TRA adopted ACSI's recommended markup of 15% to account	
14	for shared and common costs. (Page 11 of the Interim Order.) This	
15	adjustment was "hard coded" into BellSouth's TELRIC Calculator's Share	d
16	and Common cost module included in this filing.	
17		
18	Second, the TRA originally adjusted the loop fill factors in its Interim	
19	Order. (Page 12 of the Interim Order) However in its Reconsideration	
20	Ruling (11/3/99), the TRA modified this ruling and stated, "that the fill	
21	factors as proposed by BellSouth are more reasonable and should be	
22	adopted." (Page 10 Reconsideration Ruling)	
23		
24	Third, the TRA mandated that the models use Tennessee-specific	
25	depreciation lives, salvage values and other inputs used in calculating the	<u>}</u>

1	depreciation rates as established by the former Tennessee Public Service
2	Commission in Docket No. 92-13527. (Page 13 of the Interim Order)
3	The ordered depreciation rates were incorporated into the study included
4	in this docket.
5	
6	Fourth, BellSouth's cost study reflects the following adjustments ordered
7	by the TRA: (1) overall cost of capital of 10.46%; (2) debt ratio of 40%; (3)
8	7.30% cost of debt; (4) equity ratio of 60%; (5) 12.46% cost of equity.
9	(Page 15 of the Interim Order) Refer to the seventh point, below, for
10	further discussion of cost of capital input.
11	
12	Fifth, the TRA directed that BellSouth's normalized 1996 plant specific
13	expense should be reduced by 22.5% for calculating network
14	maintenance expense. (Page 17 of the Interim Order) However, in the
15	April 20, 1999 Director's Conference, the TRA reconsidered this aspect of
16	the Interim Order and limited the 22.5% reduction to network operations
17	expenses only. (Page 10 of the Transcript) The April 20, 1999 adjustment
18	is reflected in this filing.
19	
20	Sixth, the TRA originally adjusted the ad valorem tax to reflect the actual
21	1998 tax rate of .0116. (Page 17 of the Interim Order) This input was used
22	in this filing.
23	
24	Seventh, the TRA concluded that unbundled network elements should be
25	priced in a manner that considers the time value of money by employing

1 monthly compounding in calculating the monthly rate from an annual cost. (Page 18 of the Interim Order) In other words, BellSouth was ordered to 2 reflect monthly compounding using the approved overall cost of money of 3 10.46%. This methodology was reflected in BellSouth's cost study and in 4 effect changed the cost of money to 9.93%. 5 6 Eighth, the TRA ordered that the drop length be adjusted to 100'. (Page 7 8 19 of the Interim Order) This input was used in the calculation of UCL costs in this docket. Additionally since BellSouth no longer uses contract 9 10 labor to place drops, the adjustment to the labor component is not 11 necessary. 12 Ninth, The TRA adjusted the distribution of residential and business loops 13 to 69.22% residential and 30.78% business. (Page 22 of the Interim 14 Order) This distribution was reconsidered by the TRA and changed to 15 62.89% (residential) and 37.11% (business). This mix of residential and 16 business loops was utilized in the study submitted in this docket. 17 18 Tenth, the TRA found that "BST's TELRIC Calculator model should be 19 adjusted to reflect three (3) other entities equally sharing aerial support 20 structures (poles) with BST for a total of four (4)." (Page 27 of the Interim 21 22 Order) This adjustment was incorporated in this filing. 23 24 Eleventh, the TRA concluded that only direct costs should be recovered 25 through nonrecurring charges. (Page 31 of the Interim Order) Thus,

BellSouth has removed shared and common costs from the calculation of 1 nonrecurring costs. Because of this aspect of the Interim Order, BellSouth 2 had to make two computer runs. A run was made using a common cost 3 factor of 15% (which the TRA established in response to Issue 3) to 4 calculate recurring costs. Then another run was made using a common 5 6 cost factor of zero to calculate no nrecurring costs. Both runs are contained on the CD-ROM, one labeled Recurring (15% common cost 7 8 factor) and the other Nonrecurring (0% common cost factor).

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Twelfth, the TRA ordered a fallout rate of 7% for unbundled network element orders and three minutes of work activity by the Local Customer Service Center ("LCSC"). (Page 33 of the Interim Order) However, in response to BellSouth request for reconsideration at the April 20, 1999 Director's Conference, the TRA decided that "BellSouth's model should be adjusted to reflect 15 minutes of work time to resolve a fallout situation that will occur 7 percent of the time." (Page 18 of the Transcript) The April 20, 1999 clarification was included in this filing.

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Thirteenth, the TRA determined that "BST should adjust its TELRIC Calculator model to recover all costs associated with testing in recurring rates." (Page 34 of the Interim Order) Thus, BellSouth removed the testing times from the nonrecurring cost development and recovered these costs as part of the recurring rates.

24

25

Finally, the TRA determined that disconnect costs should be separated

1		from installation costs and assessed at the time of disconnect. (Page 35 of
2		the Interim Order). BellSouth presents disconnect costs separately from
3		installation costs. <sup>2</sup>
4		
5	Q.	THE FCC'S THIRD REPORT AND ORDER INCREASED THE LIST OF
6		UNES BELLSOUTH IS OBLIGATED TO PROVIDE. PLEASE BRIEFLY
7		DESCRIBE THE "NEW" ELEMENTS THAT ARE INCLUDED IN
8		BELLSOUTH'S COST STUDY.
9		
10	A.	The FCC listed eight basic types of network elements that must be
11		unbundled: (1) Loops, (2) Subloops, (3) Network Interface Device ("NID"),
12		(4) Circuit Switching, (5) Packet Switching (only in limited circumstances),
13		(6) Interoffice Transmission Facilities, (7) Signaling and Call-Related
14		Databases, and (8) Operational Support Systems ("OSS"). I will describe
15		each of these categories individually and detail the new elements
16		BellSouth is presenting with this filing.
17		
18	Q.	PLEASE DESCRIBE THE DIFFERENT TYPES OF LOOPS BELLSOUTH
19		INCLUDED IN THIS STUDY.
20		
21	A.	First let me state that the FCC's Third Report and Order did not alter the
22		definition of a loop with respect to the manner in which BellSouth
23		
24		ellSouth's inclusion of the TRA's adjustments should not be
25	cor dis	nstrued as an endorsement of the modifications. In fact, BellSouth sagrees with many aspects of the TRA's adjustments and reserves the 19th to challenge these modifications.

conducted its cost studies. The FCC's definition reads as follows: 1 2 The local loop network element is defined as a transmission 3 facility between a distribution frame (or equivalent) in an 4 incumbent LEC central office and the loop demarcation point 5 6 at an end-user customer premises, including inside wire owned by the incumbent LEC. (Appendix C, Page 3 of the 7 8 FCC Third Report and Order) 9 10 The cost studies BellSouth submitted both in Docket No. 97-01262 and in 11 this proceeding comply with this definition. 12 The FCC's Third Report and Order did, however, emphasize BellSouth's 13 obligation to offer xDSL compatible loops. BellSouth previously submitted 14 costs for various types of xDSL loops in Docket No. 97-01262, including 15 ADSL and HDSL compatible loops. (These loops meet the transmission 16 requirements set for ADSL and HDSL service.) The TRA is in the process 17 of establishing both recurring and nonrecurring rates based upon 18 BellSouth's compliance filings in Docket No. 97-01262 for these elements. 19 However, BellSouth has re-studied the nonrecurring costs associated with 20 21 these types of loops in this proceeding because the provisioning process 22 has changed radically since the studies were initially conducted. Specifically, the nonrecurring cost structure now reflects that fact that the 23 CLEC can qualify the loop, instead of BellSouth. 24

1 Additionally, for this proceeding, BellSouth has developed recurring and nonrecurring costs for 2-wire and 4-wire UCLs; e.g., the CLEC can offer a 2 variety of xDSL services. The costs are segmented between loops less 3 than 18,000 feet ("UCL-Short") and loops greater than 18,000 feet ("UCL-4 Long"). The UCLs are commonly referred to as "dry copper" loops 5 because they have no intervening equipment such as load coils, bridged 6 tap, or repeaters between the end user premises and the serving wire 7 8 center. Another type of xDSL loop that BellSouth is offering is a Universal Digital Channel ("UDC"). The UDC is similar to an ISDN loop except that it 9 10 follows stricter provisioning guidelines, such that the CLEC can 11 concatenate the 3 "ISDN" channels into a single 144 KBPS circuit. 12 Even though it is not classified as a distinct UNE, the FCC discussed Loop 13 Conditioning as it relates to the provisioning of xDSL compatible loops in its 14 Third Report and Order. BellSouth offers three types of Loop Conditioning 15 (Loop Modification ("ULM")), Load Coil/ Equipment Removal – Short, Load 16 Coil/Equipment Removal – Long, and Bridged Tap Removal. This 17 structure appropriately reflects the way in which the costs to provide this 18 service will occur. Costs were developed for removing load coils from 19 loops less than 18,000 feet and for loops greater than 18,000 feet. In its 20 study, BellSouth assumed for loops less than 18,000 feet, 10 pairs will be 21 22 conditioned (load coils removed) at the same time. This is based on projected demand for the conditioned loops. Additionally, for loops less 23 than 18,000 feet the impact of this procedure on voice grade service will be 24 25 minimal since load coils neither enhance nor impair the quality of voice

1 transmission for loops of that length. For loops greater than 18,000 feet, however, the removal of intermediary electronics (e.g., load coils) would 2 likely degrade the voice grade transmission quality, rendering it unusable 3 for voice grade transmission. To minimize the quantity of voice grade 4 circuits that will be unavailable for transmission of voice grade level 5 service, BellSouth practices assume only two circuits will be conditioned 6 initially. Bridged tap removal assumed three bridge taps are removed, one 7 8 in the underground and the other two buried or aerial. 9 10 Certain CLECs have argued that intermediary devices are not required for 11 loops less than 18,000 feet, and thus, that BellSouth is not entitled to recover costs to remove those devices. The FCC addressed such 12 arguments and stated: "We agree that networks built today normally should 13 not require voice-transmission enhancing devices on loops of 18,000 feet 14 or shorter. Nevertheless, the devices are sometimes present on such 15 loops, and the incumbent LEC may incur costs in removing them. Thus, 16 under our rules, the incumbent should be able to charge for conditioning 17 such loops." (¶193, FCC CC Docket 96-98 Third Report and Order) 18 19 The FCC also mandated that BellSouth offer loops at higher transmission 20 rates, i.e., greater than a DS1. Thus, in this filing BellSouth determined the 21 22 cost of DS3, OC3, OC12, OC48, and STS-1 loops and local channels. 23 Q. DESCRIBE THE ELEMENTS BELLSOUTH INCLUDED UNDER THE 24 SUBLOOP/ NID CATEGORIES.

1

A. BellSouth has developed costs for Unbundled Sub-Loops that are 2-wire or 2 4-wire components of a loop that can be technically unbundled. Sub-3 Loops consist of Sub-Loop Feeder ("USL-F"), Sub-Loop Distribution ("USL-4 D"), Unbundled Intra-building Network Cable ("UINC"), and Unbundled 5 Network Terminating Wire ("UNTW"). USL-F is also provided for the DS1 6 digital loop. 7 8 Sub-loop feeder is the physical transmission facility (or channel or group of 9 10 channels on such facility) which extends from the main distributing frame 11 connection in the end office to the cross-connect box. If the loop is served by digital loop carrier, a central office digital loop carrier terminal is required 12 to convert the digital signal to voice grade analog. A test point is 13 provisioned with the sub-loop feeder for remote test access. 14 15 Sub-loop distribution is the physical transmission facility from a BellSouth 16 cross-connect device to the customer's premises (i.e., the Network 17 Interface Device ("NID")). This facility will allow an end user to send and 18 receive telecommunications traffic when it is properly connected to other 19 required network elements, such as loop feeder facility. This facility 20 includes a NID (where applicable) at the customer's location in the loop. 21 22 BellSouth will also provide sub-loop interconnection to the Unbundled 23 Intrabuilding Network Cable ("UINC"). UINC is the distribution facility 24 25 inside a subscriber's building or between buildings on one customer's

1 premises (continuous property not separated by a public street or road). UINC includes the facility from the cross-connect device in the building 2 equipment room up to and including the end-user's point of demarcation. 3 4 Unbundled Network Terminating Wire ("UNTW") is unshielded twisted 5 copper wiring that is used to extend circuits from an INC terminal or from a 6 building entrance terminal to an individual customer's point of demarcation. 7 8 It is the last segment of the field-side loop distribution facilities. In multisubscriber configurations, UNTW represents the point at which the network 9 10 branches out to serve individual subscribers. 11 UNTW will be provided in Multi-Dwelling Units ("MDUs") and/or Multi-12 Tenants Units ("MTUs") where BellSouth provides wiring all the way to the 13 end-users premises. BellSouth will not provide this element in those 14 locations where the property owner provides the wiring to the end user's 15 premises or where the property owner will not allow BellSouth to place its 16 facilities to the end user. 17 18 Another group of elements that can be classified as "sub-loop" is 19 unbundled sub-loop concentration ("USLC"). These elements allow a 20 21 CLEC to concentrate loop distribution elements, provided by the CLEC, on 22 to multiple DS1s. This arrangement allows the CLEC to connect the loop distribution elements (at a concentrated level) to BellSouth's feeder 23 facilities. BellSouth will then transport the DS1s carrying the distribution 24 25 circuits back to the serving wire center for termination on a BellSouth DSX1

1 block and ultimately to the CLEC's collocation space. 2 I have discussed loop modification (conditioning) previously. To reflect the 3 possibility that the CLEC may only purchase distribution from BellSouth 4 and that conditioning may be required, BellSouth offers the following 5 6 elements: Unbundled Sub-Loop Modification - 2W/4W Copper Distribution Load 7 8 Coil/Equipment Removal and Unbundled Sub-Loop Modification - 2W/4W Copper Distribution Bridged Tap Removal. Mr. Ruscilli addresses the rates 9 10 BellSouth is proposing for these sub-loop elements in his testimony, while 11 Mr. Milner discusses sub-loop access. 12 Q. DOES THE FCC'S THIRD REPORT AND ORDER AFFECT THE COST 13 SUPPORT REQUIRED FOR THE NID? 14 15 A. The FCC's UNE Third Report and Order does not affect the costs 16 previously provided to the TRA and upon which the TRA will ultimately 17 establish rates for NIDs. However, the FCC modified the definition of the 18 NID to include "any means of interconnection of customer premises wiring 19 to the incumbent LEC's distribution plant, such as a cross-connect device 20 used for that purpose." (¶233 of the FCC Third Report and Order) 21 22 Therefore, in this filing, BellSouth has determined the nonrecurring cost associated with establishing a cross-connect in conjunction with a NID. 23 24

- NID access is designed to allow a CLEC the opportunity to connect its loop 1 to the inside wire accessed through BellSouth's NID. It is expected that the 2 CLEC will provision a loop and a NID to the customer's location. In these 3 circumstances, the CLEC may perform a physical cross-connect of the 4 inside wire to its loop to provide a communication pathway from the CLEC 5 through BellSouth's NID to the end user's inside wire. 6 7 8 If BellSouth does not have a NID, i.e., it terminates its loops directly to the inside wire of the end user, or where the existing NID is not suitable for 9 10 connection, BellSouth will install a NID. Also, at the CLEC's request, 11 BellSouth will install a second NID and will provide the cross-connect from the BellSouth NID to the CLEC NID. 12 13 Q. HAS BELLSOUTH DEVELOPED COSTS FOR CIRCUIT SWITCHING? 14 15 A. Not in this docket. Since the TRA will ultimately set rates for Unbundled 16 Switching and Local Interconnection based on costs submitted in Docket 17 No. 97-01262, it is unnecessary to re-file cost support. Additionally, the 18 FCC's Third Report and Order did not alter the existing definition of Local 19 Switching. However, the FCC's order did find that incumbent LECs will be 20 21 relieved of its obligation to provide local circuit switching under certain 22 circumstances that will be discussed by Mr. Ruscilli. 23
- Q. DID BELLSOUTH DEVELOP COSTS FOR UNBUNDLED PACKETSWITCHING?

1		
2	A.	No. Rather, BellSouth has developed the cost associated with allowing a
3		CLEC to collocate in the remote terminal and has filed those costs in this
4		proceeding. Mr. Ruscilli addresses the issue of unbundling packet
5		switching in greater detail in his testimony.
6		
7	Q.	ARE THERE ANY NEW ELEMENTS FOR INTEROFFICE
8		TRANSMISSION FACILITIES?
9		
10	A.	Yes. As with loops, the FCC ordered that BellSouth provide interoffice
11		facilities at higher transmission rates. Thus, costs were developed for both
12		dedicated and shared interoffice facilities at DS3, OC3, OC12, OC48, and
13		STS-1 transmission rates.
14		
15	Q.	WHAT IS BELLSOUTH OFFERING TO COMPLY WITH THE
16		REQUIREMENT TO UNBUNDLE CALL-RELATED DATABASES AND
17		SIGNALING?
18		

A. BellSouth previously submitted costs for 800 Access, Line Information

Database ("LIDB") Access, and CCS7 Signaling Transport in Docket No.

97-01262. The TRA will establish rates based upon BellSouth's costs for

these items. In this docket, BellSouth is augmenting its list of database

access items to include Calling Name ("CNAM"), Local Number Portability

("LNP"), and E911.

#### Q. HAS BELLSOUTH DEVELOPED ADDITIONAL COST SUPPORT FOR OSS ACCESS? 2 3 A. No. BellSouth submitted cost support associated with the development, implementation, and on-going support of electronic interfaces to 5 BellSouth's ordering systems in Docket No. 97-01262. BellSouth 6 developed electronic interfaces that allow CLECs access to BellSouth's 7 8 existing legacy systems, as directed in Paragraph 523 of the FCC's First Report and Order which states: 9 10 11 We thus conclude that an incumbent LEC must provide nondiscriminatory access to their operations support 12 systems functions for pre-ordering, ordering, provisioning, 13 maintenance and repair, and billing available to the LEC 14 itself. 15 16 The FCC's Third Report and Order did not change this requirement. 17 However, the order did mandate that BellSouth enable CLEC access to 18 loop make-up information as part of the ordering process. 19 20 Q. DID BELLSOUTH DEVELOP COSTS FOR ACCESS TO LOOP MAKE-21 **UP AS STIPULATED IN THE FCC'S THIRD REPORT AND ORDER?** 22

A. Yes. BellSouth developed costs that reflect accessing loop make-up information via two methods, either through an electronic interface or

ı	manually. If the OLEC chooses the mechanized process, the Loop
2	Facilities Assignment and Control System ("LFACS") database is
3	accessed and interactive loop data extracts based on search criteria can
4	be made. In the cost study, element J.3.1 (Mechanized Loop Make-up)
5	reflects the costs BellSouth incurs in providing the CLEC access to
6	LFACS via this mechanized process.
7	
8	BellSouth also offers the CLEC a manual process. The manual process
9	begins with the CLEC initiating a service inquiry requesting loop make-up
10	information. BellSouth personnel manually develop the loop make-up and
11	provide the CLEC a copy. In the cost study, element J.3.3 (Manual Loop
12	Make-up) reflects the costs BellSouth incurs in performing these activities.
13	
14	Q. ARE THERE ARE OTHER ELEMENTS BELLSOUTH IS OFFERING
15	THAT WERE NOT INCLUDED IN DOCKET NO. 97-01262?
16	
17	A. Yes. The FCC's Third Report and Order also stated that the incumbent
18	must test and report troubles on conditioned loops for the line's features,
19	functions, and capabilities. (¶195) Thus, BellSouth determined the costs
20	associated with testing beyond voice and incorporated such costs in its
21	filing.
22	
23	Additionally, the FCC's Advanced Service Order revised some of the
24	elements BellSouth had to offer under physical collocation. BellSouth

2		Sharing. BellSouth is obligated to "share" the existing physical loop by
3		segmenting the bandwidth. This study reflects the costs of providing such
4		an arrangement in BellSouth's central office.
5		
6	Q.	PLEASE SUMMARIZE YOUR TESTIMONY.
7		
8	A.	The TRA has ruled on the appropriate methodology for developing costs
9		for unbundled network elements - TELRIC economic costs. BellSouth
10		utilized the principles inherent in this methodology for its cost study filed
11		with this testimony. Thus, the incremental recurring and nonrecurring costs
12		are long-run and reflect an efficient, forward-looking, yet attainable,
13		network. It is also BellSouth's opinion that if the Eighth Circuit's TELRIC
14		ruling is affirmed, the costs determined by this methodology are
15		understated.
16		
17	Q.	DOES THIS CONCLUDE YOUR TESTIMONY?
18		
19	A.	Yes.
20		
21		
22		
23		
24		
25		

the remote terminal. The Advanced Services Order also addressed Line

### **TENNESSEE DOCKET NO. 00-00544**

### **BELLSOUTH TELECOMMUNICATIONS**

**CALDWELL DIRECT, EXHIBIT DDC-1** 

**NOVEMBER 13, 2000** 

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#### APPENDIX A

ELECTRONIC COPIES OF FILING, MODELS, SPREADSHEETS AND INSTRUCTIONS (PROPRIETARY AND NONPROPRIETARY)

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## TENNESSEE DOCKET NO. 00-00544 CALDWELL DIRECT, EXHIBIT DDC-1 SECTION 1 EXECUTIVE SUMMARY

#### STATEMENT OF PURPOSE

In its August 3, 2000 pre-hearing conference, the Tennessee Regulatory Authority (TRA) expanded the scope of this docket. Specifically, BellSouth Telecommunications, Inc. (hereinafter referred to as BellSouth or the Company) was required to develop costs for all unbundled network elements (UNEs) outlined by the Federal Communication Commission's (FCC's) Third Report and Order that are subject to arbitration in Tennessee.

On October 2, 2000, BellSouth filed Total Element Long Run Incremental Cost (TELRIC) studies, including shared and common costs, in compliance with the Order. This filing is to provide revised nonrecurring costs for xDSL loops, unbundled copper loops, loop conditioning, manual loop makeup and line sharing. These nonrecurring costs replace those previously filed in this Docket. The shared and common factors used in these studies are those adopted by the TRA in Docket No. 97-01262. Other factors and labor rates, not specifically addressed by the TRA in Docket No. 97-01262, have been updated from the values presented in Docket No. 97-01262 to reflect a 2000-2002 study period.

## Page 1

# BeilSouth TELRIC Calculator Unbundled Network Cost Elements Summary Report Tennessee Base Case - Nonrecurrung Only

	Dase Case - Nonrecurring Only						
11/09/2000		N.		Tes	Testing spread over service life	r service life	
	Cost Element	Recurring Recurring First	Additional Initial Subsequent	Service tuent Life	Cost	Monthly Cost	3
A.0	UNBUNDLED LOCAL LOOP						
A.6.5	2-WRE ASYMMETRICAL DIGITAL SUBSCRIBER LINE (ADSL) COMPATIBLE LOOP 2-Wire Asymmetrical Digital Subscriber I has (ADSL) Companies I now inspection of the Companies I now inspecti						
A.6.6	2-Wire Asymmetrical Digital Subscriber Line (ADSL) Compatible Loop (Nonrecuming w/ LMU)	\$186.23					
A.6.598	2-Wire ADSL Compatible Loop (Nonrecurring w/ LMU) - Testing	\$111.02	541.94				
A.6.599	2-Wife ADSL Competitie Loop (Nonrecurring w/ LMU). Disconnect	5/0.36			46 \$70.36		\$1.85
A 6 699	2 Wins Angle Committee Of Norrectaring W/o LMU) - Testing	870.18 870.28					
	C. with a ALOCA Companied Loop (Northecuming w/o LMU). Disconnect	\$94.14	14 \$15.36		46 \$70.36		\$1.85
A.7	2-WARE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL) COMPATIBLE LOOP						
7. V	2 What High BH Rate Digital Subscriber Line (HDSL) Competible Loop (Nonrecurring w/ LMU)	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	77 024				
A 7 598	2 when this is read uptain substitute (HDSL) Compatible Loop (Nonrecurring w/o LMU)	\$111.02					
A.7 599	2. Write HDSL Compatible Loop (Northeadring) w/ I MILL Presented	880.69			404 80		į
A.7.698	2-Wire HDSL Compatible Loop (Norrecuring W/o LML). Testing	\$111.78					/7.76
A.7.699	2-Wire HDSL Competible Loop (Nonrecurring w/o LMU) - Disconnect	\$96.69	39 \$84.30		46 \$86.69		\$2.27
80 ₹	4-WRE HIGH BIT RATE DIGITAL SUBSCIDIBED IN JUNE 1000 CONTACT CO.	•					
A 8.5	4-Wife High Bit Rite Digital Subscriber Line (HDS)   Comments   Co						
A.8.6	4-Wire High Bit Rate Digital Subscriber Line (HDCs) Companies Loop (Nonceauring W. LMU)	\$201.0	\$89.40				
A.8 598	4-Wire HDSL Compatible Loop (Norrecuring w/ LMLI). Tasking Lind	\$123.89					
A.8.599	4-Wire HDSL Compatible Loop (Nonrecurring w/ LMU) - Disconnect	\$127.64	•	-	52 \$127.64		S3 03
A 8 698	4-Wire HDSL Compatible Loop (Nonrecurring w/o LMU) - Testing	\$117.67					}
A.8.699	4-Wire HDSL Compatible Loop (Norrecurring w/o LMU) - Disconnect	\$127.64	4 \$125.25 0 0.0000		52 \$127.64	\$3.03	8
A 13	2.WBE CABBED I COB	0.004					
A.13.8	2-Wire Coppel Loop - short (Normagnerica ad Lutin						
A.13.9	2-Wire Copper Loop - short (Nomecuring w/o LMI)	\$187.34	4 \$74.90				
A.13.10	2-Wire Copper Loop - long (Nonrecurring w. LMU)	\$109.48					
A.13.11	2-Wire Copper Loop - long (Nonrecurring w/o LMU)	\$187.34					
A. 13.898	2-Wire Copper Loop - short (Nonrecurring w/ LMU) - Testing	\$109.48					
A.13.899	2-Wire Copper Loop - short (Norrecurring w/ LMU) - Disconnect	\$70.14		•	46 \$70.14	\$1.84	3
A.13.998	2-Wire Copper Loop - short (Nonrecurring w/o LMU) - Testing	\$111.78					
A.13.999	2-Wire Copper Loop - short (Nonrecurring w/o LMU) - Disconnect	8/0.14		•	46 \$70.14	\$1.84	3
A 13 1006	A-vive Copper Loop - long (Nonrecurring w/ LMU) - Testing	84. I4					
A 13 1108	2-vive Coppet Loop - Not (Nonrecuring w/ LMU) - Disconnect	67.11.2 6411.2		*	48 \$70.14	\$1.84	<b>I</b>
A 13.1199	A With Control Loud (Alconomy Carlot)   Festing	870.14		•			
	Deutopski - (DW) - (DW) Brown Brown I filor - door inddoor	\$94.14	\$15.36	•	\$70.14	21.84	3
A.14	4-WRE COPPER LOOP						
A.14.8	4-Wire Copper Loop - short (Nonrecurring w/ LMU)						
A 14 9	4-Wire Copper Loop - short (Nonrecurring w/o LMU)	\$200.31	\$87.86				
A 14.10	4-Wire Copper Loop - long (Nonrecurring w/ LMU)	\$122.45					
A.14.11	- Wire Copper Loop - long (Nonrecurring w/o LMU)	\$200.31					
A.14.898	4-Wire Copper Loop - short (Nonrecurring w/ LMU) - Testing	\$122.45					
A 14 899	4-Vine Copper Loop - short (Nonrecurring w/ LMU) - Disconnect	\$102.82	\$100.43	52	\$102.82	\$2.44	
A 14 990	4. Wife Copper Loop - short (Nonrecurring w/o LMU) - Testing	70.7116	•				
A 14 1098	A WAR Connect Note (Nonrecurring We LMU) - Disconnect	\$90.50	\$100.43 610.30	25	\$102.82	\$2.44	_
A 14 1099	With Copper Loop - long (konfording W. Mul.) - Testing	\$102.82	\$100.43	•			
A.14.1198	4-Wife Coppet I one found (Novemental and Man) - Use Soonnect 4-Wife Coppet I one found (Novemental and Man) - Total and Man)	\$117.67	\$24.85	76	\$102.82	\$2 44	_
A.14.1199	4. Wire Copper Loop - long (Nonrecurring w/o LMU) - Disconnect	\$102 82	-	52	\$102.82	<b>77 77</b>	_
•		69 56\$	\$19.29				
A.17	LOOP CONDITIONING						

## Page 2

# BeilSouth TELRIC Calculator Unbundled Network Cost Elements Summary Report Tennessee Base Case - Nonrecurrung Only

11/09/2000	000						-		
	Cost Element	Recurring	Non Recurring	First	Non-Recurring Additional Initial Sub	Subsequent	Service Life	spread ove	resung spread over service life ryice Cost Monthly Cost
A.17.2 A.17.4	Unbundled Loop Modification - Load Coti / Equipment Removal - long Unbundled Loop Modification - Additive		\$321.99						
3.0	ОТНЕЯ			\$12.36	\$12.36				
J.3 J.3.3 J.3.4	LOOP MAKE-UP Manual Loop Make-up w/o Facility Reservation Number Manual Loop Make-up w/ Facility Reservation Number		\$74.46						
1.4 1.4.1 1.4.2	LINE SHARING SPLITTER IN THE CENTRAL OFFICE Line Sharing Splitter - per Splitter System 96-Line Capacity in the Central Office Line Sharing Splitter - per Splitter System 24-Line Capacity in the Central Office Line Sharing-per CLECOL RC Demand Sclitter in the Capacity i		\$371.63						
14.8	Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per COMPINE) (148 per CLEC/DLEC Owned Splitter in the Central Office (per coder for 4.4.7)		\$108.66						
J.4 199 J.4 299 J.4 799 J.4.899	Line Sharing Splitter - per Splitter System 96-Line Capacity in the Central Office - Disconnect Line Sharing Splitter - per Splitter System 24-Line Capacity in the Central Office - Disconnect Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per LSOD) - Disconnect Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per LSOD) - Disconnect Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per occurrence of each group of 24 lines (48 pairs)) - Disconnect Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per occurrence of each group of 24 lines (48 pairs)) - Disconnect		\$349.37 \$349.37 \$82.12			\$15.63			
	The Common Springs of the Certified Office (per order for J.4.7) - Disconnect					\$18.26			

\$18.26

## TENNESSEE DOCKET NO. 00-00544 CALDWELL DIRECT, EXHIBIT DDC-1 SECTION 2 METHODOLOGY

For a full description of the methodology used in these studies, see BellSouth's October 2, 2000 filing in this docket.

# TENNESSEE DOCKET NO. 00-00544 CALDWELL DIRECT, EXHIBIT DDC-1 SECTION 3 DESCRIPTION OF MODELS AND PRICE CALCULATORS

For a full description of the models used in these studies, see BellSouth's October 2, 2000 filing in this docket.

# TENNESSEE DOCKET NO. 00-00544 CALDWELL DIRECT, EXHIBIT DDC-1 SECTION 4 INPUTS - LOADINGS AND FACTORS

For a full description of the inputs and factors used in these studies, see BellSouth's October 2, 2000 filing in this docket.

#### INTRODUCTION

This section contains a complete listing of the UNEs included in this filing. For a description of the cost elements and an overview of the study process for each category of elements studied by BellSouth, see BellSouth's October 2, 2000 filing in this docket. Additionally, output and input spreadsheets for each individual UNE are provided. In some instances, the spreadsheet may contain inputs and workpapers for several cost elements. In such situations, the file is provided in order of the first cost element number contained in that file.

The studies included in this filing are all based on a three (3) year study period (2000 - 2002). All long run costs associated with providing the service cost elements are identified and included in the TELRIC studies.

Testing costs are identified as separate costs and included in recurring rates as indicated on the summary report.

		Filename
A.0	UNBUNDLED LOCAL LOOP	
A.6	2-WIRE ASYMMETRICAL DIGITAL SUBSCRIBER LINE (ADSL) COMPATIBLE LOOP	
A.6.5	2-Wire Asymmetrical Digital Subscriber Line (ADSL) Compatible Loop (Nonrecurring w/ LMU)	TN-xdsl.xls
A.6.6	2-Wire Asymmetrical Digital Subscriber Line (ADSL) Compatible Loop (Nonrecurring w/o LMU)	TN-xdsl.xls
A.6.598	2-Wire ADSL Compatible Loop (Nonrecurring w/ LMU) - Testing	TNI sodat sit
A.6.599	2-Wire ADSL Compatible Loop (Nonrecurring w/ LMU)- Disconnect	TN-xdsl.xls
A.6.698	2-Wire ADSL Compatible Loop (Nonrecurring w/o LMU) - Testing	TN-xdsl.xls
A.6.699	2-Wire ADSL Compatible Loop (Nonrecurring w/o LMU)- Disconnect	TN-xdsl.xls TN-xdsl.xls
<b>A.7</b>	2-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL) COMPATIBLE LOOP	
A.7.5	2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop (Nonrecurring w/ LMU)	TN-xdsl.xls
A.7.6	2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop (Nonrecurring w/o LMU)	TN-xdsl.xls
A.7.598	2-Wire HDSL Compatible Loop (Nonrecurring w/ LMU) - Testing	TN-xdsl.xls
A.7.599	2-Wire HDSL Compatible Loop (Nonrecurring w/ LMU)- Disconnect	TN-xdsl.xis
A.7.698	2-Wire HDSL Compatible Loop (Nonrecurring w/o LMU) - Testing	TN-xdsl.xls
A.7.699	2-Wire HDSL Compatible Loop (Nonrecurring w/o LMU) - Disconnect	TN-xdsl.xls
<b>A.8</b>	4-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL) COMPATIBLE LOOP	
A.8.5	4-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop (Nonrecurring w/ LMU)	TN-xdsl.xls
A.8.6	4-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop (Nonrecurring w/o LMU)	TN-xdsl.xls
A.8.598	4-Wire HDSL Compatible Loop (Nonrecurring w/ LMU) - Testing	TN-xdsl.xls
A.8.599	4-Wire HDSL Compatible Loop (Nonrecurring w/ LMU) - Disconnect	TN-xdsl.xls
A.8.698	4-Wire HDSL Compatible Loop (Nonrecurring w/o LMU) - Testing	TN-xdsl.xis
A.8.699	4-Wire HDSL Compatible Loop (Nonrecurring w/o LMU) - Disconnect	TN-xdsl.xls
A.13	2-WIRE COPPER LOOP	
A.13.8	2-Wire Copper Loop - short (Nonrecurring w/ LMU)	TNI seeled selec
A.13.9	2-Wire Copper Loop - short (Nonrecurring w/o LMU)	TN-xdsl.xls
A.13.10	2-Wire Copper Loop - long (Nonrecurring w/ LMU)	TN-xdsl.xls
A.13.11	2-Wire Copper Loop - long (Nonrecurring w/o LMU)	TN-xdsl.xls
A.13.898	2-Wire Copper Loop - short (Nonrecurring w/o LMU) - Testing	TN-xdsl.xls
A.13.899	2-Wire Copper Loop - short (Nonrecurring w/ LMU) - Disconnect	TN-xdsl.xls
A.13.998	2-Wire Copper Loop - short (Nonrecurring w/o LMU) - Testing	TN-xdsl.xls
A.13.999	2-Wire Copper Loop - short (Nonrecurring w/o LMU) - Disconnect	TN-xdsl.xls
A.13.1098	2-Wire Copper Loop - long (Nonrecurring w/ LMU) - Testing	TN-xdsl.xis
A.13.1099	2-Wire Copper Loop - long (Nonrecurring w/ LMU) - Disconnect	TN-xdsl.xls TN-xdsl.xls

A.13.1198		
A.13.1199	2-Wire Copper Loop - long (Nonrecurring w/o LMU) - Disconnect	TN-xdsl.xls
	or provided in the contract of	TN-xdsl.xls
A.14	4-WIRE COPPER LOOP	
A.14.8		
A.14.9	4-Wire Copper Loop - short (Nonrecurring w/ LMU)	TN-xdsl.xls
	4-Wire Copper Loop - short (Nonrecurring w/o LMU)	_
A.14.10	4-vvire Copper Loop - long (Nonrecurring w/ LML)	TN-xdsl.xls
A.14.11	4-vvire Copper Loop - long (Nonrecurring w/o LML)	TN-xdsl.xls
A.14.898	4-Wire Copper Loop - short (Nonrecurring w/ LMU) - Testing	TN-xdsl.xls
A.14.899	4-Wire Copper Loop - short (Nonrecurring w/ LMU) - Disconnect	TN-xdsl.xls
A.14.998	4-Wire Copper Loop - short (Normecurring W/ LMU) - Disconnect	TN-xdsl.xls
A.14.999	4-Wire Copper Loop - short (Nonrecurring w/o LMU) - Testing	TN-xdsl.xls
A.14.1098	4-Wire Copper Loop - short (Nonrecurring w/o LMU) - Disconnect	TN-xdsl.xls
A.14.1099	The support coop a folia (180) lie (181) link to the support to th	TN-xdsl.xls
	4-vvire Copper Loop - long (Nonrecurring w/ LMII) - Disconnect	TN-xdsl.xls
A.14.1198	4-Ville Copper Loop - long (Nonrecurring Wo I MII) Tooting	
A.14.1199	4-Wire Copper Loop - long (Nonrecurring w/o LMU) - Disconnect	TN-xdsl.xls
		TN-xdsl.xls
A.17	LOOP CONDITIONING	
A.17.2	Unbundled Loop Modification - Load Coil / Equipment Removal - long	
A.17.4	Unbundled Loop Modification - Additive	TN_MOD.xls
	The English Food Modification - Vadilities	TN_MOD.xls
J.0	OTHER	_
J.3	LOOP MAKE-UP	
J.3.3		
J.3.4	Manual Loop Make-up w/o Facility Reservation Number	Tn-lmu.xls
0.0.4	Manual Loop Make-up w/ Facility Reservation Number	Tn-lmu.xls
		r ii-ii iiu.XiS
J.4	LINE SHARING SPLITTER IN THE CENTRAL OFFICE	
J.4.1	Line Sharing Splitter - per Splitter System 96-Line Canacity in the Canacity	<b>-</b>
	Onice	TnLineSh.xls
J.4.2	Line Sharing Splitter - per Splitter System 24-Line Capacity in the Central	
	Office Office	TnLineSh.xls
J.4.6	Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per	
	LSOD)	TnLineSh.xls
J.4.7	Line Sharing - per CI EC/DI EC Owned C-194	
	Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per occurrence of each group of 24 lines (48 pairs))	TnLineSh.xls
J.4.8	Line Sharing - per CL EC/DL EC C.	
	Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per order for J.4.7)	TnLineSh.xis
J.4.199	0.401 101 0.4.1)	
3.1.100	Line Sharing Splitter - per Splitter System 96-Line Capacity in the Central Office - Disconnect	TnLineSh.xls
J.4.299	Office - Disconlifect	
0.4.233	Line Sharing Splitter - per Splitter System 24-Line Capacity in the Central	TnLineSh.xls
14600	Office - Disconnect	THEMEOH.XIS
J.4.699	Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per LSOD) - Disconnect	TnLineSh.xls
14700	2000) - Disconnect	THEMESHARS
J.4.799	Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per	Tal inoChasta
14.000	TOTAL TOTAL OF CACH GIDDE OF MAINDE MARKET TOTAL	TnLineSh.xls
J.4.899	Ellic Orlang - per CLEC/DLEC Owned Splitter in the Central Office (no.	Toline Ohio
	order for J.4.7) - Disconnect	TnLineSh.xls

NONRECURRING COSTS OUTPUTS

# Nonrecurring Cost Summary

Tennessee A.6.5 - 2-Wire Asymmetrical Digital Subscriber Line (ADSL) Compatible Loop (Nonrecurring w/ LMU)

11/7/2000

Nonrecurring Cost

Additional	Direct         Shared Cost         TELRIC           \$75.5459         \$0.0000         \$75.5459           \$75.5459         \$0.0000         \$75.5459           \$75.735         X         1.0030           \$75.7735         X         1.0000
First	Shared  Cost
	Nonrecurring Cost Development Sheet Col H \$185.6740  Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor  Nonrecurring Economic Cost

9+Q÷H	. ¥	Additional 51 14706 \$5 1900 \$5 1900 \$5 16 0476 \$2 7 1832 \$7 0043 \$7 0000 \$3 5734 \$50 0000 \$3 5734 \$50 0000 \$7 55 55 55 55 55 55 55 55 55 55 55 55 55	Midellonal 51 14765 51 14765 51 14765 51 14765 51 14765 51 1476 51 147
	ة	\$72 2054 \$23 37 75 \$23 37 75 \$10 84 75 \$10 84 75 \$2 77 53 \$1 92 0 \$1 192 0 \$1 193 75 \$1 193 75 \$1 193 75 \$1 193 75 \$1 193 75 \$1 193 75	TELRIC First \$27 2054 \$23 3775 \$10 6476 \$10 6476 \$1 7753 \$1 7753 \$1 7768 \$7 468 \$7 468 \$7 468 \$1 5 367 \$1 5 367 \$1 5 367
ų	Naconnact st	Additional Additional Additional Additional Association (Association Association Associati	Neconnect   Additional   Additional   Additional   Necono   Neco
G=ExF	Š	0000 03 0000 03	Decounted Decoract Cost delies   Addition
u.	Disconnect Discount	1.1681 1.1681 1.1681 1.1681 1.1681 1.1681 1.1681 1.1681 1.1681	Discounact Discount Factor 11681 11681 11691 11691 11691 11691 11691 11691 11691 11691
ing w/ LMU} E=BxC	Disconnect Cost	0000 05 0000 05	Coef Additional Strong Coop St
	9 9 9 0	0000 03 0000 03 0000 03 0000 03 0000 03 0000 03	December 2 Cost Cost Cost Cost Cost Cost Cost Cost
mpaticle Loop (Noirecurring w/ LMU D=AxC	Install Cost Additional	\$11 4706 \$1.0950 \$1.0950 \$1.0950 \$1.0950 \$1.0950 \$1.00	Cost Additional 5114/06 51900 51900 519724 5
*	First C D	\$27 2054 \$23 3775 \$16 8476 \$10 8733 \$2753 \$3 3724 \$24 4801 \$1 0620 \$7 1466 \$55 3669 \$15 1367	First CC CC ST 2054 S 10 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
	Direct Labor Rate	851 17 840 54 833 64 833 64 834 34 832 76 842 04 845 41	TELRC Labor Rate 85117 85117 850 317 850 317 830 62 830 62 830 62 830 76 832 76 832 76 832 76 832 76 832 76 832 76 832 76 832 76 832 76 833 76 835 76 835 76 836 76 837 76 838 76 839 76 830 76 80 80 80 80 80 80 80 80 80 80 80 80 80
	Disconnect Worktimes Additional	00000 0 00000 0 00000 0 00000 0 00000 0 00000 0 00000 0 00000 0	Mortimes
	Disc Worl First	0000 0 0000 0 0000 0 0000 0 0000 0 0000 0 0000 0 0000 0	Pieconnec Worklines Worklines 0 0000
< :	rktimes	0.2242 0.1656 0.4156 0.0450 0.1628 0.0000 0.0000 0.0059 0.0000	Worthwee  Worthwee  Worthwee  Additional
		0.5317 0.7500 0.4156 0.3333 0.0823 0.0400 0.0333 0.0333 0.3333	First Work Work Work Work Work Work Work Co. 15317 0 15307 0 15303 0 15303 0 15303 0 17303 0 17303 0 1333
	JF C/Payband Description Certain Court		JF CP Payband  Description  Systems Description  Customer Point Of Construct  Lob Grade 57  Grout Provisioning (AFG)  Crout Provisioning (AFG)  Actives A Fracishy Inventory (AFG)  Constant & Mac Fred Construct  Constant & Mac Fred Construct  Install & Mac - Spec Svcs (SSIA)  Frestall & Mac - Spec Svcs (SSIA)
	Peybend	•	JFC/ SDWC 230X 230X 1657 464X 444X 444X 444X 444X 444X 441X 441X
11/7/2000	Function SERVICE INQUIRY	SERVICE INQUIRY BROWNERING ENGINEERING ENGINEERING ENGINEERING CONNECT & TEST CONNECT & TEST CONNECT & TEST TRAVEL	Function SERVICE INQUIRY SERVICE INQUIRY SERVICE INCOMENGE ENGINEERING ENGINEERING ENGINEERING COMMECT & TEST COMMECT & TEST COMMECT & TEST TRAVEL

# Nonrecurring Cost Summary

Tennessee A.6.6 - 2-Wire Asymmetrical Digital Subscriber Line (ADSL) Compatible Loop (Nonrecurring w/o LMU)

11/7/2000

Nonrecurring Cost

	TELRIC \$41.8164 X 1.0030 X 1.0000 \$41.9424 X 1.0000
Additional	Shared
	Direct Cost \$41.8164
	\$110.6877 \$110.6877 \$110.6877 ( 1.0030 \$111.0212 ( 1.0000
First	Shared Cost \$0.0000 \$0.0000
	Direct Cost \$110.6877 \$110.6877
	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost

A.6.6 - 2-Wire Asymmetrical Digital Subscriber Line (ADSL) Compatible Loop (Nonrecurr

H=D+G	sat Additional	\$0.5455 \$1.6648 \$0.2718 \$1.5138 \$1.3724 \$7.0043 \$3.5734	\$25 8504 \$0 80000 41.8184	\$0 5455 \$1 6848 \$0 2718 \$1 5138 \$1 3724 \$7 0000 \$3 5734 \$2 6000 \$1 5734 \$2 6000
	Direct Cost First Ad	\$0 5455 \$1 6848 \$1 0873 \$2 7753 \$1 3724 \$1 0920 \$1 1468	) 	455 848 873 753 754 724 801 801 468 869 867
G=ExF	Disconnect st Additional	0000 0% 0000 0% 0000 0% 0000 0% 0000 0%	\$0 0000 \$0 0000 Total Teconnect It Additional	20 0000 03 0000 0000 03 0000 0000 0000 0000 0000 0000 0000 0000
	Discounted Disconnect Cost First Addition	0000 03 0000 03 0000 03 0000 03 0000 03	\$0 0000 \$0 0 \$0 0000 \$0 0 T Discounted Disconnect	0000 08 0000 08 0000 08 0000 08 0000 08
u.	Disconnect Discount Factor	1681 1681 1681 1681 1681 1681 1681	1 1681 1 1681 Disconnect Discount Factor	11681 11681 11681 11681 11681 11681 11681 11681
E=BxC	¥ ¥	0000 03 0000 03 0000 03 0000 03 0000 03	_ 3	0000 05 0000 05 0000 05 0000 05 0000 05 0000 05 0000 05 0000 05
E=8	Disconn Cost First	0000 03 0000 03 0000 03 0000 03 0000 03 0000 03	\$0 0000 \$0 0000 Disconnect Cost	0000 05 0000 05 0000 05 0000 05 0000 05 0000 05
D≂AxC	tali Additional	\$1 0455 \$1 546 \$0 2718 \$1 5136 \$1 3724 \$7 0043 \$3 5734	₹ .	\$1 6848 \$1 5138 \$1 5138 \$1 3724 \$1 0043 \$0 0000 \$2,5734 \$2,58504 \$0,0000
Dev	Install Cost First	\$1 6848 \$1 6848 \$1 0873 \$2 7753 \$1.3724 \$1.0920 \$7.1468	\$55,0669 \$15,1367   Install   Cost	\$0 5455 \$1 0873 \$2 7753 \$1 3724 \$24 4801 \$1 0920 \$1 1468 \$55 3669 \$15 1367
O	Direct Labor Rate	\$32 62 \$32 62 \$32 63 \$32 63 \$32 76 \$32 76	MAS 41 TELRIC Labor Rate	531 - 7 532 05 532 05 533 64 533 78 532 78 545 64 545 64
1		0000 0 0000 0 0000 0	₹.	00000 0 00000 0 00000 0 00000 0 00000 0
•	Disconnect Worktimes First Ac	0000 0 0000 0 0000 0	Disconnect Worktimes First Ad	00000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	tion Meditional Additional	0 0416 0 0083 0 0400 0 0400 0 1828 0 0000	5	0.0416 0.0450 0.0450 0.0450 0.0450 0.0450 0.0450 0.0450 0.0450
<	Worktimes First As	0 0416 0 0333 0 0626 0 0400 0 6390 0 0333	0.3333 0.3333 Installation Worktimes First	0.0416 0.0333 0.0825 0.0400 0.0330 0.1700 1.2193 0.3333
	JFC/Payband  Description  Lustomer Pout Of Contact - IFSCA FSC	Job Grade 57 Service Advocacy Center (SAC) Cross Provisioning Group (CPG) Address & Taclity Inventory (AFG) AC Cast Advocate Orth (CAC) Wor Management Center (WMC) CO Install & More Field Crit & Field Investigation of Control Control Control And Control Control And Control Crit & Field Control And Control Crit & Field	10	Job Grade 57 Serves Accessor Central Traditional Job Grade 57 Serves Accessor Central (SAC) Grad Provisional Group (CPG) Accessor Central Ce
	Payband 230X	AMXX 4WXX 4WXX 4 AXX	<u> </u>	4657 4677 4677 4677 4677 4717 4117 4117
11/7/2000	Function SERVICE ORDER	ENGINEERING ENGINEERING ENGINEERING ENGINEERING CONNECT & TEST CONNECT & TEST CONNECT & TEST	TRAVEL Function SERVICE ORDER	ENGINEERING ENGINEERING ENGINEERING ENGINEERING CONNECT & TEST CONNECT & TEST CONNECT & TEST CONNECT & TEST TRAVEL

# Nonrecurring Cost Summary

Tennessee A.6.598 - 2-Wire ADSL Compatible Loop (Nonrecurring w/ LMU) - Testing

Nonrecurring Cost

11/7/2000

	\$67.7632 \$67.7632 \$67.7632 ( 1.0030 \$67.9673	\$67.9673
Additional	Shared Cost \$0.0000 \$0.0000	
	Direct	
	\$70.1454 \$70.1454 1.0030 \$70.3568 1.0000	00000
First	\$0.0000 \$0.0000 \$0.0000 *	
	Direct Cost \$70.1454 \$70.1454	
	Nonrecurring Cost Development Sheet Col H  Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost	•

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#### Nonrecurring Cost Development

	ø	Sout	\$31 2447 \$2 3823 \$34 1362	67.7632	v	Additional \$31 2447 \$2 3823 \$34 1362 67.7632
	9∙0≃H	Direct Cost	\$31 2447 \$4 7645 \$34 1362	70.1454	œ	\$31.2447 \$4.7645 \$34.1362 70.1484
	ų.	Haconnect It Additional	0000 0\$	<b>5</b>	Naconnect	\$0 0000 \$0 0000 \$0 0000 Total
	G=ExF	Discounted Disconnect Cost First Addition	0000 0\$ 0000 0\$		Discounted Disconnect	\$0 0000 \$0 0000 \$0 0000
	ı	Disconnect Discount Factor	1.1681 1.1681 1.1681		Disconnect Discount	1.1681
	E=BxC	🖫	0000 0\$ 0000 0\$		inect bt Additional	0000 0\$
	E	Disconnect Cost First Ac	\$0 0000 \$0 0000 \$0 0000		Disconnect Cost First Ad-	0000 0\$
w/ LMU) - Testing	č	Ž	\$31.2447 \$2.3823 \$34.1362		II t Additional	\$31 2447 \$2 3823 \$34.1362
p (Nonrecurring	D=AxC	install Cost First	\$31 2447 \$4.7645 \$34.1362		Install Cost First	\$31.2447 \$4 7645 \$34 1362
A.6.598 - 2-Wire ADSL Compatible Loop (Nonrecurring w/ LMU) - Testing	v	Direct Labor Rate	\$38 34 \$42 04 \$45.41		TELRIC Labor Rate	\$38.31 \$42.04 \$45.41
598 - 2-Wire ADS		=1	0000 0		Ŝ	0000 0 0000 0
<b>7</b>	æ	Disconnect Worktimes First Add	00000			0000 0 0000 0
		Moditional	0.0567		_ \$	0.8156 0.0567 0.7517
	<	Morktimes Worktimes First Ad	0.1133		Installation Worktimes First A	0.8156 0.1133 0.7517
		JEC/Payband Description Arr Cost Adversas Cost (ACAC)	CO Install & Mice - Spec Svcs (SSIM)		JF CrPayband Description	Acc Cust Advocate Cnr (ACAC) CO Instat & Mice Faed - Cht & Fac Instal & Mice - Spec Svos (SSIM)
		Payband 4AXX	431X 411X		JFC/ Payband	4900 411X 411X
	11/7/2000	Function CONNECT & TEST	CONNECT & TEST		Function	CONNECT & TEST CONNECT & TEST CONNECT & TEST

Tennessee A.6.599 - 2-Wire ADSL Compatible Loop (Nonrecurring w/ LMU)- Disconnect

Nonrecurring Cost

	\$20.7438 \$20.7438 \$20.7438 \$20.8080	\$20.8063
Additional	Shared  Cost \$0.0000 \$0.0000	
	Direct Cost \$20.7438	
	\$111,7614	1.0000
First	Shared Cost \$50.0000 \$0.0000 X	ר
	Direct Cost \$111.4256 \$111.4256	
	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax)	Common Cost Factor  Nonrecurring Economic Cost

					A.6.599 -	2-Wire ADSL Col	A.6.599 - 2-Wire ADSL Compatible Loop (Nonrecurring w/ LMU)- Disconnect	onrecurring w/ LA	MU)- Disconnect							
11/7/2000			∢		60		ပ	D=AxC	Ų	E=BxC	ű	u.	G=ExF	L.	Ð+Q÷H	(2
	į		Installation	letion	Disconnect	<b>rect</b>	Direct	Install	=	Disconnect	Į.	Disconnect	Discounted Disconnect	Disconnect		
•	ָבָי בי		Worktimes	imee	£	100	_			Cost	_	Discount	Cost	=	Direct Cost	o <b>s</b> t
Function	Payband	ì	Fret	Additional	ļ	Additional	2	Fizi	Additional	First	Additional	Factor	First	Additional	First	Additional
SERVICE INQUIRY	230X	_	00000	00000	0.5000	0.1667	<b>\$31 12</b>	0000 os	20 0000	\$15,5850	\$5.1950	1.1681	\$18 2049	\$6 0683	\$18 2049	\$6 0683
ENGINEERING	Ž Ž	_	00000	00000		0.0067		0000 O\$	0000 0\$	\$1.4858	\$0.2243	1 1681	\$1 7355	\$0.2620	\$1 7355	\$0 2620
ENGINEERING	4M1X		00000	00000		0 0058		0000 0\$	20 0000	\$0.2001	\$0 2001	1 1681	\$0 2338	\$0.2338	\$0 2338	\$0 2338
CONNECT & TEST	4AXX		00000	00000	0.4823	0 0 0 0	\$38.31	\$0,000	20 0000	\$18 4782	\$19155	1 1681	\$21 5844	\$2 2375	\$21 5844	\$2 2375
CONNECT & TEST	431X	CO Install & Mice Field - Ckt & Fac	00000	00000	0.2125	0.0992	<b>2</b> 75 04	0000 0\$	0000 o <b>\$</b>	\$8 9335	1690	1 1681	\$10 4352	\$4 8696	\$10 4352	<b>2</b> 8698
CONNECT & TEST	411X	Install & Mice - Spec Svcs (SSIM)	0000	0000	0.7833	0 1333	\$45.41	0000 0\$	\$0 0000	\$35.5712	\$6 0547	1 1681	\$41 5507	\$7 0725	\$41 5507	\$7.0725
TRAVEL	¥11¥	Install & Mice - Spec Svcs (SSIM)	00000	00000	0.3333	00000	\$45.41	0000 0\$	\$0.000	\$15 1367	\$0.000	1.1681	\$17 6812	0000 0\$	\$17 6812	0000 0\$
														Total	111.4256	20.7438
			Installation	ation	Disconnect	Į,	TELRIC		=	Disconnect	Į,	Disconnect	Discounted Discounses	Maconnect		
1	JEC.		Worktimes	imes.	Worktimes	•	Labor	Cost		<b>18</b> 00	-	Discount	Coef	=	TELRIC	
Function	Payband	- 1	First	Additional	First	Additional	Rate	First	Additional	First	Additional	Factor	First	Additional	First	Additional
SERVICE INQUIRY	230X	Customer Point Of Contact - ICSC/LCSC	0.0000	00000	0 2000	0.1667	\$31.17	0000 0\$	\$0.000	\$15.5850	\$5 1950	1.1681	\$18 2049	\$6 0683	\$18 2049	\$6 0683
ENGINEERING	Ž Ž	Circuit Provisioning Group (CPG)	00000	0000	0 0442	0 0067	<b>2</b> 33 <b>64</b>	\$0,000	0000 os	\$1 4858	\$0 2243	1.1681	\$1 7355	\$0.2620	\$1 7355	\$0.2620
ENGINEERING	4M1X	Address & Facility Inventory (AFIG)	00000	0000	0.0050	0.0058	E363	0000 o <b>\$</b>	0000 o\$	\$0 2001	\$0.2001	11681	\$0 2338	\$0 2338	\$0 2338	\$0 2338
CONNECT & TEST	¥	Acc Cust Advocate Critr (ACAC)	00000	0000	0 4823	0.0500	<b>\$38.31</b>	0000 o <b>\$</b>	\$0,000	\$18.4782	\$1.9155	1681	\$21 5844	\$2 2375	\$21 5844	\$2 2375
CONNECT & TEST	431X	CO install & Mice Field - Ckt & Fac	00000	0000	0.2125	0 0 0 0 0 0	<b>2</b> 2.02	\$0,000	20,000	\$6.9335	₩ 1690	11681	\$10 4352	₩ 9698	\$10 4352	\$4 B698
CONNECT & TEST	411X	Install & Mice - Spec Svcs (SSIM)	00000	00000	0.7833	0.1333	<b>X</b> 5.4	0000 0\$	0000 o <b>\$</b>	\$35.5712	\$6 0547	1.1881	\$41,5507	\$7.0725	<b>¥1.55</b> 07	\$7 0725
TRAVEL	411X	Install & Mice - Spec Svcs (SSIM)	00000	00000	0.3333	0.0000	<b>25</b> ±	0000 O\$	\$0.0000	\$15,1367	0000 0\$	1 1661	\$17.6812	0000 o <b>\$</b>	\$17 6812	0000 03
														Total	444 4764	30 7438

Tennessee A.6.698 - 2-Wire ADSL Compatible Loop (Nonrecurring w/o LMU) - Testing

Nonrecurring Cost

	TEIRIC	\$67.7632	\$67.7632	1.0030	\$67.9673	1.0000	\$67.9673
Additional	Shared Cost	\$0.000	\$0.000	*		×	
	Direct Cost	\$67.7632	\$67.7632				
	TELRIC	\$70.1454	\$70.1454	1.0030	\$70.3568	0000.1	\$70.3568
First	Shared Cost	\$0.000	\$0.000	*		<	
		\$70.1454	\$70.1454				
		Total Cost Development Sheet Col H	Gross Receints Tax Factor	Cost (including Case Descript: Taxx	Common Cost Factor	Nonrecurring Economic Cost	

			Additional \$31 2447 \$2 3823 \$34 1362 67.7632	S31 2447 \$2 3823 \$34 1362 67.7632
	H=D•G	ũ	2	잁
		i	\$31 2447 \$3 1 2447 \$4 7645 \$34,1362 70,1454	TEL First \$31 2447 \$4 7645 \$34 1362 70.1454
		sconnect	\$0.000 \$0.000 \$0.0000 \$0.0000	Additional S0 0000 \$0 0000 Total Total
	G=ExF	Discounted Disconnect Cost	0000 0\$ 0000 0\$	Discounted Disconnect  Cost Cost Additions \$2 0000 \$0 000 \$0 0000 \$0 000 \$1 0000 \$0 000 \$1 0000
	u.	Disconnect	1 1681 1 1681 1 1681	Disconnect Obscount Factor 1 1681 1 1881
	0	ect Additional	0000 0\$ 0000 0\$	Additional \$0.0000 \$0.0000 \$0.0000
9	E=BxC	Disconnect Cost	0000 0\$	Disconnect Cost Cost S0 0000 80 0000 \$50 0000
CMU) - 104110		Additional	\$31.2447 \$2.3623 \$34.1362	Additional \$31.2447 \$2.3823 \$34.1362
TO THE TARGET TO THE COURSE TO BE INCURSOR WIND AND LINE) - 1980/00	D=AxC	first First	\$31 2447 \$4 7645 \$34 1362	Eirst Cost 531 2447 84 7645 834.1362
Companion Loc	υ	Direct Labor Rate	\$38.31 \$42.04 \$45.41	TELRIC Labor Rate \$38.31 \$42.04 \$45.41
		ect Additional	000000	Additional 0.0000 0.0000
	60	Disconnect Worktimes First Ad	0000 0 0000 0	Disconnect Worktimes Worktimes First 0.0000 0.0000
		tion nes Additional	0.8156 0.0587 0.7517	Mes Additional 0.8156 0.0567 0.7517
	<	Installation Worksimes First Ad	0.8158 0.1133 0.7517	Mortitimes  Worktimes  First 0 8156 0 1133 0 7517
		JFC/Payband Description	4AXX Acc Cust Advocate Cnt (ACAC) 431X CO Instalf & Mice Field - Cht & Fac 411X Instalf & Mice - Spec Svcs (SSIM)	JF.C/Payband Description Acc Cust Advocate Crit (ACAC) CO Install & Mica Fight - Crit & Facc Install & Mica - Spec Svcs (SSIM)
		JFC/ Payband	431X 431X 411X	JFC/ Payband 4AXX 431X 411X
	11/7/2000	Function	CONNECT & TEST CONNECT & TEST CONNECT & TEST	Function CONNECT & TEST CONNECT & TEST CONNECT & TEST

Tennessee A.6.699 - 2-Wire ADSL Compatible Loop (Nonrecurring w/o LMU)- Disconnect

11/7/2000

Nonrecurring Cost

	TELRIC	\$15.3127	\$15.3127	1.0030	\$15.3588	\$15.3588
Additional	Shared Cost	\$0.000	\$0.000	×	*	ζ
	Direct Cost	\$15.3127	\$15.3127			
	TELRIC	\$93.8580	\$93.8580	1.0030	1.0000	\$94.1408
First	Shared Cost	\$0.000	<b>\$</b> 0.000	<	*	
	Direct Cost	\$93.8580	\$93.8580			
	Monrocurring Cost December 21	Total Cast Development Sheet Col H	lotal Cost Gross Receipts Tax Factor	Cost (including Gross Receipts Tax)	Common Cost Factor	Nonrecurring Economic Cost

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	ď	ij.	Additional \$0.6372 \$0.6302 \$0.2338 \$1.2375 \$4.8698 \$7.0000 \$0.0000	Additional S0 6372 80 2338 82 2375 84 8686 87 72 55 55 56 57 56 57 56 57 56 57 56 57 56 57 56 57 56 57 56 57 56 57 56 57 56 57 56 57 57 57 57 57 57 57 57 57 57 57 57 57
	9+Q=H	Direct Cost	First 80 6372 81 7355 80 2338 821 5844 810 4352 817 6812 817 6812	First 80 6372 43 7556 80 2339 80 4322 841 5507 847 6612 83,889
	G=ExF	Disconnect	Additional 80 6372 80 6372 80 2338 82 2335 84 8998 87 10725 80 0000 Total	Meconnect  Additional  \$0.6372  \$0.6372  \$0.238  \$2.2375  \$4.8999  \$7.025  \$0.0000  Total
	<u></u>	Discounted Disconnect Coet	First \$0.6372 \$1.7355 \$0.2336 \$21.5644 \$10.4352 \$41.5507 \$17.6812	Discounted Disconnect Cost First S0 6372 \$1 7355 \$1 7355 \$2 238 \$2 238 \$2 238 \$2 1 8642 \$1 5507 \$1 6812 \$1
	u.	Disconnect	1.1681 1.1681 1.1681 1.1681 1.1681 1.1681	Discounsed Discount Factor 1.1681 1.1681 1.1681 1.1681 1.1681
	E=BxC	Disconnect Cost	\$0.000	Cost Additional 25 Cost Additional 25 Cost Additional 25 Cost Additional 25 Cost 24 Cost 25 Co
Į.	ü	0 0		Disco C C 50.2455 81.4656 81.4656 81.8782 89.335 815.1367
No Limbje Disconnec	D=AxC	Install Cost Additional	ļ	Additional Cost Additional St 0000 St
A Bullion and the second		Ī		First Part Part Part Part Part Part Part Par
	ပ	Direct Labor Rate		TELRO Labor Rate Rate 833 64 833 64 84 84 84 84 84 84 84 84 84 84 84 84 84
	8	onnect ktimes Addi		Disconnect Worklines Additional 3175 Additional 3175 OSS 0005 0050 823 0050 1333 0000
		Dis. Wo First	0 0 1 7 5 0 0 0 1 7 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Mont First 00175 0042 0042 0042 0042 0058 0058 0058 0058 0058 0058 0058 005
	<	Installation Worktimes Additional	0000 0 0000 0 0000 0 0000 0 0000 0 0000 0	Wortstmes  Additional  000 000 000 000 000 000 000 000 000
		First Wo	0000 0 0000 0 0000 0 0000 0 0000 0	First West Prints (1992)
			Customer Providor Contact - ICSCA.CSC Croul Provisioning Group (CPC) Address & Facility Inventory (AFG) Acc Cust Advicese Crite (ACAC) CO Install & Mileo - Spec Sves (SSIM) Install & Mileo - Spec Sves (SSIM)	JFC/Payband Description Custome Point Of Contact - ICSCA.CSC Great Provisioning Group (CPG) Address & Facility Inventory (AFG) Address & Facility Inventory (AFG) Co.C Last Advocase Curt (ACAC) CO Install & Mice - Spec Svcs (SSM) Install & Mice - Spec Svcs (SSM)
		<u></u>	230X 4N4X 4M1X 4 4M1X 11 431X 11 411X	JFC/ Paybend 230X 4MIX 4MIX 4MIX 4MIX 1 4AXX 1 411X 411X
	11/7/2000	Function	SENOIC ONDER ENGINEERING ENGINEERING CONNECT & TEST CONNECT & TEST TRAVEL	Function SERVICE ORDER ENGNEGERIG ENGINEERIG CONNECT & TEST TRAVEL

Tennessee A.7.5 - 2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop (Nonrecurring w/ LMU)

Nonrecurring Cost

	\$76.2057 \$76.2057 \$76.2057 1.0030 \$76.4353 \$76.4353
Additional	Shared  Cost \$0.0000 \$0.0000  X
	Direct Cost \$76.2057 \$76.2057
	\$188.3133 \$188.3133 \$188.3133 1.0030 \$188.8807 1.0000
First	Shared
	Direct Cost \$188.3133 \$188.3133
	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost

		¥	Additional	\$114706	\$5 1950	\$16 8476	\$3.3782	\$15138	\$1 3724	\$7 0043	\$0,000	\$3 5734	\$25 8504	0000 0\$	76.2057			Additional	\$114706	\$5 1950	\$16 8476	\$3 3782	\$1 5138	\$1 3724	\$7 0043	0000 0\$	\$35734	\$25 B504	76.2057
	9+Q=H	Direct Cost	First	\$27 2054	\$23 3775	\$16 8476	\$13 5127	\$2 7753	\$13724	\$24 4801	\$1 0920	27.146B	\$22,3669	\$15 1367	188.3133		TELRIC	First	İ	\$23,3775	\$16 8476	\$13 5127	\$2 7753	\$13724	\$24 4801	\$1 0920	\$7 1468	\$55,3669	100.3133
	ı,	sconnect	Additional	0000.0\$	0000 03	0000 0\$	\$0.0000	0000	0000 05	00000	0000 0\$	0000	0000	0000 os	Total	Connect		Additional	0000 0\$	0000 0\$	\$0 0000 \$	\$0,000	0000 03	0000	0000 05	0000.05	0000		Total
	G=ExF	Discounted Disconnect Cost	First	0000 0\$	0000 0\$	0000 O\$	0000 0	0000 03	0000 0\$	0000 05	0000 05	00000	20000	00000		Discounted Disconnect	Cost	Ē	0000 0\$	0000 0	00000	0000	0000 05	00000	00000	00000	00000	00000	
	u.	Disconnect Discount	Factor	1.1681	1681	1681	1.1681	199	1 1681	100	189	9 5	8	1901		Disconnect	Discount	Factor	1 1681	1.68	1991	1 1681	89.		1991	1001	100	500	
	E≖BxC	nnect	Additional	00000	000000	0000 05	0000 05	00000	00000	2000	0000	5000	2000	2000		mect		Additional	0000 05	0000.0\$	00000	00000	0000		00000		200	0000 05	
ring w/ LMU)	Ē	Disconnect Cost	First	0000 05	00000	00000	000000	00000	989	00000	2000	20 000	2000	3		Disconnect	Cost		00000	00000	00000	00000		5	9000	00000	5000	0000 0\$	
A.7.5 - 2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop (Nonrecurring w/ LMU)	D=AuC	Cost	Additional	\$11.4706	616 8476	4100470	\$3.3702 \$1.8178	27.0	\$7,0043	00000	\$3 5734	\$25 8504	50,000			3		Additional	90/4	616 8476	63 3 3 8 3	20/004	\$1.3724	\$7,0063	00000	£3 27.34	\$25,8504	0000 0\$	
HDSL) Compatible	<b>ٿ</b>	<u>r</u> o	THIE	277 203	C16.0478	£13 £137	\$27.753	£1 1724	\$24.4801	\$1 0920	\$7 1468	\$55 3669	\$15 1367			Install	ខ្ញុំ	430. 200	427.273	C16 8478	\$13 5127	\$2 7753	\$13724	\$24 4801	\$1 0920	\$7 1468	\$55,3669	\$15.1367	
Subscriber Line (I	U	Direct Labor		2 2 2 2	2	3	23.64	534.31	\$38.31	\$32 76	<b>54</b> 2.04	\$45.41	£5 <b>%</b>			TELRIC	0	C61 17	23.13	200	200	23.62	\$34.31	\$38.31	\$32.76	<b>\$</b> 42.04	545 41	\$45.41	
h Bit Rate Digital	•	Disconnect Worktimes Additional	0000	9000	00000	00000	00000	00000	00000	0000	00000	00000	00000			Disconnect	Worktimes Additional	0000	00000	00000	00000	0000	0.000	00000	00000	00000	00000	00000	
A.7.5 - 2-Wire Hig		Pirat Wor	0000	00000	00000	00000	00000	00000	00000	00000	00000	0000	0000			Disc		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
	< <	Installation Worktimes Additional	0 2242	0 1667	0 4156	0.0833	0.0450	0000	0 1826	00000	0 0820	0 2693	0000			Installation	Additional	0 2242	0.1667	0.4156	0 0833	0.0450	0.0400	0.1828	0000	0.0850	0 5693	0.000	
		inati Wor	0.5317	0 7500	0.4156	0.3333	0 0625	0.0400	0.6390	0 0333	0.1700	1.2193	0.3333			ensta		0 5317	0.7500	0.4156	0 3333	0 0825	0 0400	0.6390	0 0333	0.1700	1.2193	0 3333	
		Jf-C/Payband Description	Systems Design	Customer Point Of Contact - ICSCA.CSC	Job Grade 57	Job Grade 57	Circuit Provisioning Group (CPG)	Address & Facility Inventory (AFIG)	Acc Cust Advocate Cntr (ACAC)	Work Management Center (WMC)	CO Install & Mice Field - Ckt & Fac	metall & Mice - Spec Svcs (SSIM)	Install & Mice - Spec Svcs (SSIM)			60.0	Description	Systems Designer w/Sales Com	Customer Point Of Contact - ICSC/LCSC	Job Grade 57	Job Grade 57	Circuit Provisioning Group (CPG)	Address & Facility Inventory (AFIG)	Acc Cust Advocate Cntr (ACAC)	Work Management Center (WMC)	CO Install & Mics Field - Ckt & Fac	install 6 Mice - Spec Svcs (SSIM)	Install & Mice - Spec Svcs (SSIM)	
		۱		230X	1657	1657	*YTX	¥M1X	4AXX	4WXX	431X	¥ :	<u> </u>			73.84	Payband	SDWC	230X	JG57	<b>1</b> 057	*N4X	4M1X	Š	4WXX	431X	¥ :	¥11X	
	11/7/2000	Function	SERVICE INQUIRY	SERVICE INQUIRY	ENGINEERING	ENGINEERING	ENGINEERING	ENGINEERING	CONNECT & TEST	CONNECT & LEST	CONNECT & TEST	TOAKE	TOWER.				Function	SERVICE INQUIRY	SERVICE INQUIRY	ENGINEERING	ENGINEERING	ENGINEERING	ENGINEERING	CONNECT & LEST	CONNECT & TEST	CONNECT & TEST	CONNECT & LEST	IKAVEL	

Tennessee A.7.6 - 2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop (Nonrecurring w/o LMU)

Nonrecurring Cost

	TELRIC \$41.8164 \$41.8164 ( 1.0030 \$41.9424 ( 1.0000
Additional	Shared  Cost \$0.0000 \$0.0000  \$0.0000  X  X
	Direct Cost \$41.8164 \$41.8164
	\$110.6877 \$110.6877 \$110.6877 1.0030 \$111.0212 1.0000 \$111.0212
First	Shared
	Direct Cost \$110.6877 \$110.6877
	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost

		1	Additional	\$0 5455	\$1 6848	\$0 2718	\$15138	\$13724	\$7,0043	000	2007	000 C7	41.8164			Additional	\$0 5455	\$16848	\$0 27 18	\$15138	\$1.3724	\$7 0043	0000 os	\$35734	\$0000 \$0000	41.8164
	D+O=H	Direct Cost	First	\$0 5455	\$1 6848	\$1 0873	\$2.7753	\$1.57.24	\$4 4801	0260 14	666 3660	\$15 1767	110.6877		TELRIC	First		\$1 6848	\$1 0873	\$2 7753	\$1 3724	\$24 4801	\$1 0920	\$7 1468	\$15,1367	110.6877
	G=ExF	Discounted Disconnect Cost	Additional	00000\$	0000 05	0000 05	00000	900		800	0000	0000	Total	Jecono	4	Additional	0000 0\$	\$0,000	0000 0\$	0000 0\$	\$0 0000	00000	00000	00000	20,000	Total
	-5	Discounted		80,000	0000 0\$	0000 05	00000	5000	00000	20 0000	20 0000	00000		Olecounted Discounted	Cost	First	0000 0\$	0000 0\$	0000 03	0000 0\$	0000	0000 05	00000	00000	0000 0\$	
	u.	Discount	Factor	<b>3</b>	1.1681	1881	1681	11681	1.1681	1 1681	1.681	1.1681		Disconnect	Discount	Factor	1.1681	1.1681	2	1681	1681	1801	1901	1881	1 1681	
	ý	, <b>3</b>	Additional	onn of	0000 05	00000	0000 0\$	20.000	0000 0\$	\$0.000	20 0000	\$0,000		¥		Additional	00000	0000 03	20000	20,000	00000			0000 0\$	\$0.000	
g w/o LMU)	E=BxC	Disconnect	First	00000		0000	0000 0\$	\$0,000	\$0,000	\$0.000	\$0,000	\$0.000		Disconnect		15	00000	0000	00000	00000	0000	0000	20 0000	\$0,000	\$0.0000	
oop (Nonrecurrin	Ų		Additional	61 6949	\$0.2718	\$1.5138	\$1.3724	\$7,0043	\$0.000	\$3.5734	\$25 8504	0000 O\$				Additional	66.0	91.0040	61 5130	81 3734	\$7,0073	20 0000	\$3.5734	\$25.8504	\$0.0000	
IL) Competible L	D=AxC	Install	10 5455	S1 6AAB	\$1.0873	\$2.7753	\$1.3724	\$24.4801	\$1.0920	\$7.1468	\$55.3669	\$15.1367		Install	Cost	LINE CO	\$1 684R	61 00 10	127.753	277.13	\$24 4801	\$1 0920	\$7 1466	\$55 3669	\$15,1367	
Tennessee A.7.8 - 2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop (Nonscurring w/o LMU)	ပ	Direct Labor	K31 17	25025	\$32.62	\$33.64	\$34.31	\$38.31	\$32.76	75.05	75	<b>X</b> 2		TELRIC	<b>6</b>	631.17	3	23.02	233.64	134.31	\$38.31	\$32.76	<b>1</b> 50	245.43	<b>X</b> 2	
Rate Digital Sub		ect Additional	00000	00000	0.000	0000	0000	0000	00000	00000	0000	00000		T .	Additional	0000	0000	00000	00000	00000	00000	0.000	0000	0000	0.000	
8 - 2-Wire High Bi	60	Disconnect Worktimes First	00000	00000	0 0000	00000	00000	9000	9000	9000	0000	0.000		Disconnect	First A	00000	0000	0000	0000	00000	00000	0000	00000	0000	0.000	
7.4		on Additional	0 0175	0.0416	0 0063	0.0450	00400	9790	0000	0.0000	00000	885.5		<b>S</b> :	Additional	0.0175	0 0416	0 0083	0.0450	0.0400	0 1828	00000	0 0850	0.5693	3	
	<	Installation Worktimes First Ac	0.0175	0.0416	0.0333	0.0625	00400	0.033	2021	12101	22.0	2000		Installation	First	0.0175	0.0416	0.0333	0 0825	0 0400	0 6390	0 0333	0.1700	1.2193		
		JFC/Payband Description	Customer Point Of Contact - ICSC/LCSC	Job Grade 57	Service Advocacy Center (SAC)	Circuit Provisioning Group (CPG)	Acc Cust Advocate Cor (ACAC)	Work Management Center (WMC)	CO Install & Mice Field - Cit & Fac	Install & Mice - Soec Syce (SSM)	Install & Mice - Spec Syca (SSIM)	(many) source and		JFC./Parksand	Description	Customer Point Of Contact - ICSC/LCSC	Job Grade 57	Service Advocacy Center (SAC)	Circuit Provisioning Group (CPG)	Address & Facility Inventory (AFIG)	Acc Cust Advocate Cntr (ACAC)	Work Management Center (WMC)	CO Mistan & Mice Freid - Citi & Fac	Install & Mice - Spec Syce (SSM)		
		JFC/ Payband	230X	<b>1</b> C2/	¥ X	4617	•	•			411X			JFC.	Payband	230X	JG57	4FXX	4N4X	XIX	¥¥X	× × × ×	X	* *		
0000	0002///1	Function	SERVICE ORDER	CHOINEENING	ENGINEERING	FNGINEERING	CONN.CT & TEST	CONNECT & TEST	CONNECT & TEST	CONNECT & TEST	TRAVEL				Function	SERVICE ORDER	ENGINEERING	ENGINEERING	ENGINEERING	ENGINEERING	COMMECT & TEST	CONNECT A TEST	CONNECT & TEST	TRAVEL		

Tennessee A.7.598 - 2-Wire HDSL Compatible Loop (Nonrecurring س/ ۱ MI ۱) - Taesing

nDSL Compatible Loop (Nonrecurring w/ LMU) - Testing	Nonrecurring Cost	Additional           Direct         Shared         TELRIC           272         \$84.0449         \$0.0000         \$84.0449           272         \$84.0449         \$0.0000         \$84.0449           376         X         1.0030           376         X         1.0000           376         X         1.0000           376         X         1.0000           \$84.2981         \$84.2981	
oie Loop (Nonrecurri	Nor	TELRIC \$86.4272 0 \$86.4272 0 \$86.4272 0 \$86.6876 0 \$86.6876 0 \$86.6876	
ire nust compatii		Shared	
A.1.330 - Z-VVICE		Direct Cost \$86.4272 \$86.4272	
	11/7/2000	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost	

		190	Additional	\$47 5264	\$2 3823	\$34 1362	84.0449			•	Additional	SM7 5264	\$2.3823	\$34 1362	84.0449	
	9+Q=H	Direct Cost		\$47 5264						TELRIC			\$4 7645			
	G=ExF	Disconnect	Additional	0000 0\$	00000	00000	Total		Neconnect	*	Additional	0000 0\$	\$0 0000	0000 O\$	Total	
	ឌូ	Discounted Disconnect Cost	First	0000 O\$	00000	00000			Discounted Disconnect	200	First	0000 os	0000 os	0000 0\$		
	u	Disconnect Discount	Factor	1.1681	1681	1 1681			Disconnect	Discount	Factor	1.1681	11681	1.1681		
	E=BxC	Disconnect	Additional	00000	0000 05	200000			Disconnect	# .	Additional	0000	00000	0000.04		
•	w		First	0000 05	000004	2000			Disc	ن ا	rica	2000	00000	2000		
	D=AxC	3 8	8	#07C /#4					Install	A4400	ADDITION	4020:744	5705.76	2001.1002		
			647 6764	20707	524 1363	3			Ξ,	,	647 6764	2736.75	6967 763	7001		
	U	Direct	2	3				٠	TELRIC		6.28.34	2007	3			
	<b>6</b> 0	Disconnect Worktimes	0000	00000	00000				Disconnect	Additional	ł		0000			
		Disc	0000	00000	00000				Diace	First	0000	0000	00000			
	<b>«</b>	Installation Worktimes Additional	1 2406	0.0567	0.7517				Installation	Additional	1 2406	0.0567	0.7517			
		Insta Worl	1 2406	0 1133	0.7517				Insta	Finat	12406	0.1133	0.7517			
		JFC/Payband Description	Acc Cust Advocate Cntr (ACAC)	CO Install & Mice Field - Citi & Fac	Install & Mice - Spec Svcs (SSIM)				JFC/Payband		Acc Cust Advocate Cnir (ACAC)	CO Install & Mice Field - Ckt & Fac	Install & Mice - Spec Svcs (SSIM)	•		
		JFC/ Payband		431X	<b>4</b>				JFC/	Payband	4AXX	431X	4 1 1			
	11/7/2000		CONNECT & TEST	CONNECT & TEST	CONNECT & TEST						CONNECT & TEST	CONNECT & TEST	CONNECT & TEST			

Tennessee A.7.599 - 2-Wire HDSL Compatible Loop (Nonrecurring w/ LMU)- Disconnect

11/7/2000

Nonrecurring Cost

			\$20.7438	1.0030	\$20.8063	\$20.8063
Additional	Shared	\$0.000	\$0.0000	^	*	
	Direct Cost	\$20.7438	\$20.7438			
	TELRIC	\$111.4256	\$111.4256	\$111 7614	1.0000	\$111.7614
First	S	\$0.000			*	
	ļ	\$111.4256	\$111.4256			
	Monte and	Total Cost	Gross Receipts Tax Factor	Cost (including Gross Receipts Tax)	Common Cost Factor	Nonrecurring Economic Cost

	ی		Additional 86 0683 87 02620 87 2820 87 2838 87 2375 87 0725 87 0725 80 0000 20 7438	Additional F6 0683 S0 2620 S0 2338 S2 2338 S4 8698 S1 0025 S0 0000 20 733
	B+D+G	ā	First \$18 2049 \$1 7355 \$0 2338 \$21 5644 \$10 4352 \$41 5507 \$11 4256	FFPR TELRIC 818 2049 \$1 735 \$9 2338 \$21 534 \$1 141 525 \$1 141 525 \$11 41 4256
	<u>u</u>	Disconnect	Additional 86 0833 80 2820 80 2339 82 2335 84 8690 87 0725 87 0725 80 0000	Meconnect  Additional  \$6.083  \$0.200  \$0.200  \$1.000  Total
	G=ExF	Discounted Disconnect Cost	First \$18,2049 \$1,7355 \$0,233 \$21,5844 \$10,435 \$41,5507 \$17,6812	Discounted Discounsect  First  Cost Addition \$18.007 \$18.7355 \$1.7355 \$2.338 \$2.338 \$2.338 \$2.338 \$2.348 \$2.358 \$4.1564 \$1.1567 \$1.15687 \$7.07
	ı	Disconnect	1.1681 1.1681 1.1681 1.1681 1.1681 1.1681 1.1681	Disconnect Discount Factor 11681 11681 11681 11681 11681 11681
	E=8xC	Disconnect Cost	]	Cost Additional Additional Additional Additional Additional Additional Sci 150 001 50 204 1 815
τ	ш	9 J	\$15.5850 \$1.4858 \$0.2001 \$18.9335 \$35.5712 \$15.1367	Disco C First \$15 5850 \$15 6850 \$18 4782 \$18 4782 \$18 5712 \$15 1367
Tennessee A.7.598 - 2-Wire HDSL Compatible Loop (Nonrecuring w/ LMU). Disconnect	D=AxC	Install Cost Additional	0000 03 0000 03 0000 03 0000 03 0000 03	Coet Additional 50 00000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 00
see (Nonrecurring w		T.		First 5 0000 50 0000 5
Tennessee Compatible Loop (No	ပ	Direct Labor Rate		TELRIC Labor Rate 531-17 531-17 530-31 542-04 542-04 542-04 542-04 543-04 543-04 543-04 543-04 543-04 543-04
599 - 2-Wire HDSL	•	connect Attimes Addit	0 1667 0 0067 0 0059 0 0992 0 1333 0 0000	Mortime  Worklines  Modification  Modificati
12 <b>.</b> 4		First	0 5000 0 0442 0 0058 0 4823 0 2125 0 7833 0 3333	Piret Woor 1 500 0 6402 0 6402 0 6403 0 725 0 7125 0 7125 0 7125
	<	alletion rttimes Addit	0000 0 0000 0 0000 0 0000 0	Wortlines  Wortlines  Additional  000  000  0000  0000  0000  0000  0000
		fine Wo Finst	0000 0 0000 0 0000 0 0000 0	First 0 0000 0 0000 0 0000 0 0000 0 0000 0 0000 0 0000 0 0000
		JFC/Payband Description	Casamere rank or cantaler - KSCALCSC Caral Provisioning Group (CPG) Address & Echiph Fundony (AFG) Acc Cast Advocate Crite (ACAC) CO Instalf & Mice Field - Cit & Fac Instalf & Mice - Spec Svcs (SSIM) Instalf & Mice - Spec Svcs (SSIM)	JECPayband  Description Consistone Powl Of Contact - ICSCA.CSC Coroll Provisioning Group (IPC) Address & Facility Inventory (AFIG) Address & Facility Inventory (AFIG) Of Unital & Micro - Spec Syca (SSIM) Initial & Micro - Spec Syca (SSIM)
		Parband	.,,,,,	JFC/ 230X 4N4X 4N1X 4AXX 431X 411X 411X
ļ	11/7/2000	Function SERVICE INCLIRY	ENGINEERING ENGINEERING CONNECT & TEST CONNECT & TEST TRAVEL	Function SERVICE INCLIFY ENGINEERING ENGINEERING ENGINEERING CONNECT & TEST CONNECT & TEST TRAVEL

Tennessee A.7.698 - 2-Wire HDSL Compatible Loop (Nonrecurring w/o LMU) - Testing

Nonrecurring Cost

	13. 13. 13.	\$84.0449	\$84.0449	1.0030	\$84.2981	1.0000	\$84.2981
Additional	Shared Cost	\$0.0000	\$0.000	^		~	
	Direct Cost	\$84.0449	\$84.0449				
	TELRIC	\$86.4272	\$86.4272	1.0030	\$86.6876	1.0000	\$86.6876
First	Shared Cost	\$0.000	\$0.000	*		*	
		\$86.4272	\$86.4272				
		Nonrecurring Cost Development Sheet Col H	Control Descriptor Tax Factor	Gloss Receipts Tax Factor	Cost (including Gross Receipts Tax)		Nonrecurring Economic Cost

		=	Additional \$47 5264 \$2 3823 \$34 1362 84.0449	47 5264 \$2 3823 \$34 1362 84,0449
	9+G=H	Direct	First \$47.5264 \$4.7645 \$34.1362 \$6.4272	TELRIC First / \$47 5264 \$4 7645 \$34 1362 86.4272
	4	sconnect	## Adolf Sons   ## Adolf Sons	Additional \$0.0000 \$0.0000 Total
	G=ExF	Discounted Disconnect Cost	\$0,000 \$0,000 \$0,000	Discounted Disconnect  Cost First  \$0 0000 \$0 0000 \$0 0000 \$1 0000 \$1 0000 \$2 0000 \$3 0000 \$4 0000 \$5
	ıL	Disconnect	1.1681 1.1681	Disconnect Discount Factor 1 1681 1 1681
	ပ္ခ	nect A	0000 0\$ 0000 0\$	Additional 80 0000 \$0 0000
<b>D</b>	E=BxC	Disconnect Cost	0000 0\$	Disconnect Cost First \$0.000 \$0.0000 \$0.0000
WOLMUJ-IOSER	ŭ	d Additional	\$47.5264 \$2.3823 \$34.1362	Additional \$47.5264 \$2.3623 \$34.1362
, (Nonecurring v	D=AxC	Install Cost First	847.5284 84.7645 834.1362	First Cost 847 5264 84.7645 834.1362
The state of the s	ပ	Direct Labor Rate	\$38.31 \$42.04 \$45.41	TELRIC Labor Rate \$38.31 \$42.04 \$45.41
		connect viktimes Additional	00000	nect Additional 0 0000 0 0000
i	•	Disconnect Worldimes First Add	00000	Disconnect Worktimes First Add 0.0000 0.0000
		tion mes Additional	1.2406 0.0567 0.7517	Hon Meditional 1,2406 0,0567
	<	Installation Worktimes First Ad	1.2408 0.1133 0.7517	Montdine Worktime Workinse First Ad 12408 0 1133 0 7517
		JFC/Payband Description	4XXX Acc Cust Advecate Cnt (ACAC) 431X CO Instalt & Mice Field - Cat & Fac 411X instalt & Mice - Spec Svot (SSM)	JF.C/P eyband Description Acc Cust Advocate Crit (ACAC) CO Insist & Mice Field - Cit & Fac- Insist & Mice - Spec Svoz (SSIM)
		JFC/ Payband	431X 431X 411X	Payband 4AXX 431X 411X
	11/7/2000		CONNECT & TEST CONNECT & TEST CONNECT & TEST	Function CONNECT & TEST CONNECT & TEST CONNECT & TEST

Tennessee A.7.699 - 2-Wire HDSL Compatible Loop (Nonrecurring w/o LMU) - Disconnect

Nonrecurring Cost

11/7/2000

	\$15.3127 \$15.3127 \$15.3127 1.0030 \$15.3588 ( 1.0000
Additional	Shared Cost \$0.0000 \$ \$0.0000 \$ \$ \$0.0000 \$ \$ \$ \$ \$
	Direct Cost \$15.3127 \$15.3127
	\$93.8580 \$93.8580 1.0030 \$94.1408 \$94.1408
First	Shared Cost \$0.0000 \$0.0000 ×
	Direct Cost \$93.8580 \$93.8580
	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost

					A.7.599 - 2-	A.7.599 - 2-Wire HDSL Compai	patible Loop (Non	recurring w/o LM	J - Disconnect							
11/7/2000			<		60		ပ	D=AxC		E ≠ BxC	U	<b>.</b>	G=ExF	ű.	H=D+G	
	į	9	Installation	5 :	Disconnec	ţ.	Direct	Install		Disconnect	Ę.	Discount	Discounted Disconnect Cost	teconnect t	Direct Cost	ī
;	75	•	Working	Additional		Additional	Rate	First	Additional	Fist	Additional	Factor	First	Additional	First	Additional
Luction	Dugoka	÷	1	00000	1	0.0175	\$31.17	0000 0\$	00000	\$0.5455	\$0.5455	1.1681	\$0 6372	\$0.6372	\$0.6372	\$0 6372
SERVICE ORDER	X067	CUSTOMER FORM OF CONTROL	0000	0000	0.0442	0.0067	\$33.64	00000\$	20 0000	\$1.4858	\$0.2243	1.1661	\$1 7355	\$0.2820	\$1 7355	\$0.2620
ENGINEERING	XX	Curcuit Provisioning Group (CPG)	886	886	65000	95000	15 16 21	00000	20 0000	\$0,2001	\$0.2001	1681	\$0.2338	\$0 2338	\$0.2338	\$0 2338
ENGINEERING	¥M1X	Address & Facility Inventory (AFIC)	886	9990	0.4823	00500	15.80.31	0000	0000 05	\$18.4782	\$1.9155	1.1681	\$21 5844	\$2 2375	\$21 5844	\$2 2375
CONNECT & TEST		Acc Cust Advocate Cnif (ACAC)	886	999	2126	0.000	20.00	000005	00000	\$8,9335	24 1690	1.1681	\$10 4352	\$4.8698 \$4	\$10 4352	₩ 14 8698
CONNECT & TEST		CO Install & Mice Field - Cit & Fac	9000	888	0.7833	0 1333	5	000005	20 0000	\$35.5712	\$6 0547	1 1681	\$41 5507	\$7 0725	\$41 5507	\$7 0725
CONNECT & TEST		Install & Mice - Spec Svcs (SSIM)	300	0000	0.7833		3	0000	0000 05	\$15 1367	00000\$	1 1681	\$17,6812	000000\$	\$17.6812	\$0,000
TRAVEL.	¥	Install & Mice - Spec Svcs (SSIM)	00000	0.000	0.3333	3	į	2						Total	93.6560	15,3127
			Installation	£	Disconnec	Ţ	TELRIC	Hatel		Disconnect	<b>M</b> Ct	Disconnect	Discounted Disconnect	Haconnect	76 017	
	, Car	BC (Beshand	Worktimes	2	Worktime	2	Labo	200		200		Discours				
			, in the	Additional		Additional	Se .	First	Additional	First	Additional	Factor	First	Additional	in in	Additional
FUNCTION	Lavoreno		8	0000	00175	00175	231.17	0000 0\$	\$0,000	\$0.5455	\$0.5455	1.1681	\$0 6372	\$0.6372	\$0 6372	20 6372
SERVICE ORDER	X062	Customer Porty of Contact - ICSCLCSC	3 8	0000	0.0442	0.0067	233.64	00000	20 0000	\$1.4858	\$0 2243	1.1681	\$1,7355	\$0.2620	\$1 7355	\$0.2620
ENGINEERING	XX	Circuit Provisioning Group (CPG)	9000		89000	0.0058	534.31	00000	20 0000	\$0,2001	\$0.2001	11681	\$0 2338	\$0.2338	\$0 2338	\$0 2338
ENGINEERING	4M1X	Address & Facalty Inventory (AFKs)	0000	8000	4822	0000	£38.3	00000	0000 03	\$18 4782	\$1.9155	11681	\$21.5844	\$2 2375	\$21 5844	\$2 2375
CONNECT & TEST		Acc Cust Advocate Critr (ACAC)	0000	00000	2020	2000	200	9	0000	SR 9335	1690	1.1681	\$10 4352	7 8698	\$10 4352	\$4.8696
CONNECT & TEST		CO Install & Mice Field - Ckt & Fac	0000	0000	0.2123	2000	2 2 2 2		0000	\$35.5712	28 0547	11681	\$41,5507	\$7.0725	\$41 5507	\$7 0725
CONNECT & TEST		Install & Mice - Spec Svcs (SSIM)	00000	00000	0.7833	0000			9000	\$15 1367	0000 05	1991	\$17 6612	20 0000	\$17 6812	\$0.000
TOAVE	411X	install & Mice - Spec Svcs (SSIM)	00000	00000	0.3333	0.0000		AU boon	200					79.7	Anna Co	14 3137

Tennessee A.8.5 - 4-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop (Nonrecurring w/ LMU)

**Nonrecurring Cost** 

	\$89,1309 \$89,1309 1,0030 \$89,3995 1,0000 \$89,3995
<u>Additional</u>	Shared Cost \$0.0000 \$0.0000 × × × × ×
	Direct Cost \$89,1309 \$89,1309
	\$201.2385 \$201.2385 \$201.2385 1.0030 \$201.8448 1.0000
First	Shared Cost \$0.0000 \$0.0000 ×
	Cost \$201.2385 \$201.2385
	Nonrecurring Cost Development Sheet Col H  Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost

	,	Additional	\$11.4706	\$5.1950	\$16 8476	\$3 3782	\$1 5138	\$1 3724	\$7 0043	0000 0\$	\$3 5734	\$38 7756	0000.0\$	89.1309			Andriona	\$11.4706	\$5 1950	\$16 8476	\$3 3782	515136	2/5/	\$7 0043	00000	\$3 5734	\$38 7756	\$0.0000 89.1309
H*D+G	Direct Co	1	\$27 2054	\$23 3775	\$16 8476	\$13 5127	\$2.7753	\$1.3724	\$24.4801	\$1.0920	\$7 1468	\$68 2921	\$15.1367	201.2385		TELRIC	1	\$27 2054	\$23 3775	\$16.8476	\$13 5127	\$2 7753	\$1 3724	\$24 4801	\$1 0920	\$7.1468	\$68 2921	201.2385
	nnect	Aditional	0000 0\$	0000 0\$	0000 os	0000 0\$	\$0.000	00000	\$0,000	00000	0000 05	0000	80.000	Total	nnect		Additional	00000	00000\$	0000 0\$	0000 05	0000 03	00000	0000 0\$	0000 0	0000	0000	Total
G=ExF	Discounted Disconnect Cost	First	0000	0000	00000	0000 0\$	0000 0\$	0000 0\$	0000 0\$	0000 0\$	0000 0\$	0000 0\$	00000\$		Discounted Disconnect	3	1	\$0,000	0000 0\$	00000	20 0000	0000	0000	0000 0\$	0000	0000 0\$	\$0 0000 \$	0000 0\$
u.	Disconnect	Factor	1.1920	1.1920	1 1920	1.1920	1.1920	1.1920	1.1920	1.1920	1.1920	1.1920	1.1920		Disconnect	Discount	Factor	1.1920	1.1920	1 1920	1 1920	1.1920	1.1920	1.1920	1.1920	1.1920	1.1920	1 1920
0		Additional	\$0.000	\$0.000	\$0,000	0000 0\$	0000 0\$	0000 0\$	20 0000	20 0000	0000 0\$	20 0000	20,000		_		Additional	0000 O\$	\$0,000	0000 0\$	0000:0\$	0000 0\$	00000	\$0.000	\$0.0000	0000	\$0.000	\$0.000
E=BxC	Disconnect	First	0000.0\$	\$0,000	\$0.000	80 0000	\$0,000	20,000	00000\$	00000\$	20 0000	\$0,000	000005		Disconnect	Cost	Ē	0000:0\$	\$0.000	0000 O\$	\$0.000	0000 0\$	0000 0	\$0.000	\$0.000	\$0.000	\$0,000	\$0.0000
	_	Additional	\$11.4706	\$5.1950	\$16.8476	\$3.3782	\$15138	\$1 3724	\$7,0043	20 0000	\$3.5734	\$38.7756	0000 05		_		Additional	\$11.4706	\$5.1950	\$16.8476	\$3.3782	\$1.5138	\$1.3724	\$7 0043	\$0,000	\$3.5734	\$38.7756	0000 OS
D=AxC	Install	Ē	\$27,2054	\$23 3775	\$16.8478	\$13.5127	\$2 7753	\$1.3724	\$24 4801	\$1 0920	\$7 1468	\$68 2921	\$15 1367	2	instal	Cost	Fizi	\$27.2054	\$23.3775	\$16.8476	\$13.5127	\$2,7753	\$1 3724	\$24.4801	\$1.0920	\$7 1468	\$68.2921	\$15.1367
	Direct	Rate	\$51.17	21.13	2502	25 025	23.62	27.3	5.38.3	27. 7.2	20.2	25.5	25.2	,	TELRIC	Labor	Rate	\$51.17	\$31.17	7.07	3,03	\$33.64	\$34.31	\$38.31	\$32.76	\$42.04	1457	M5 41
High on Kale Dignal Subscrib B	nect	Additional	00000	00000	0000	0000	0000	00000	0000	00000	0000	0000	800	3	1300		Additional	00000	0000	0000	00000	00000	00000	00000	00000	00000	00000	0.0000
A.B.S - 4-Wire High E	Disconnect	First	0000	0000	00000		0000	0000		9000	0000		999	2000	Disconnect	Worktime	Fired	0000	0000	00000	00000	00000	00000	00000	00000	00000	00000	00000
	tion	Additional	0 2242	1667	0.150	0000	2000	9 6	9000	0.000	00000	0.0000	80000	0000	sole.		Additional	0.7247	0.1867	97170	0.000	0000	0.0400	0.1828	00000	0.0850	0.8539	0.000
<	Installation		.,,,,	9000	0.730	0.4100	0.555	0.0023	0000	00000	0.033	900	1.5038	0.3333	colletterand	Worktimes	Elent	2000	002.0	95.4	0.3133	0.0825	000	96390	0.033	200	255	0 3333
		Stringson C	Description	Systems Designer wickers Com	Customer Point Of Contact - ICSCALCSC	Job Grade 57	Job Grade 57	Circuit Provisioning Group (CPC)	Address & Facility Inventory (AFIG)	Acc Cust Advocate Cniff (ACAC)	Work Management Center (WMC)	CO Install & Mice Field - Cit & Fac	Install & Mice - Spec Svcs (SSIM)	Install & Mice · Spec Svcs (SSIM)		IFC/Dashand		Materiation	Oystems Designer with the Com-	Customer Point of Condict - Resoluted	Job Grade 5/	Comitte Browniscoins Green (CDC)		Address & recently inventionly (Articl)	ACC CUST AGVOCATE CITY (ACAC)	Work Management Corses (*****)	CO Install & MICS FIRM - CAT & FRC	Install & Mice - Spec Svcs (SSIM)
	Š	5	Payound	SDAC	X30X	1657	JG57	*YYX	*IN	¥	4WXX	431X	<b>4</b>	41X		7	5	- SAVOSUG	SOWC	X062	650	) (S) (S)		4M1X	1	* AWA	431X	ž
11/7/2000			Function	SERVICE INCUIRY	SERVICE INQUIRY	ENGINEERING	ENGINEERING	ENGINEERING	ENGINEERING	CONNECT & TEST	CONNECT & TEST	CONNECT & TEST	CONNECT & TEST	TRAVEL			;	Function	SERVICE INQUIRY	SERVICE INCOMY	ENGINEERING	ENGINEERING	ENGREENE	ENGINEERING	CONNECT & TEST	CONNECT & TEST	CONNECT & TEST	TRAVEL

Tennessee A.Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop (Nonrecurring w/o LMU)

Nonrecurring Cost

	TELRIC \$54.7416 \$54.7416 ( 1.0030 \$54.9065 ( 1.0000	
Additional	Shared Cost \$0.0000 \$0.0000	
	Direct Cost \$54.7416 \$54.7416	
	\$123.6129 \$123.6129 \$123.6129 1.0030 \$123.9854 1.0000	
First	Shared Cost \$0.0000 \$0.0000 × × × ×	
	Cost \$123.6129 \$123.6129	
	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost	

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				A8.6.	-Wire High Bit	Rate Digital Subs	scriber Line (MDS	A.8.6 - 4-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop (Nonrecurring w/o LMU)	op (Nonrecuring	w/o LMU)						
11/7/2000			∢		•		ပ	D=AkC	n	E=BxC		u.	G=ExF	u.	Ð+D+€	
	Ĭ	91.0	Installation		Disconnec	T =	Direct	Install		Disconnect	t	Disconnect	Discounted Disconnect Cost	sconnect	Direct Cost	
Function	Partend	-	First	Additional	First	Additional	Rate	First	Additional	Firet	Additional	Factor	First	Add	First	힐
SERVICE ORDER	230X	Customer Pon	175	0.0175	00000	00000	\$31.17	\$0.5455	\$0.5455	0000:0\$	0000.0\$	1.1920	0000 0\$	0000 0\$	\$0 5455	\$0 5455
FNGINEFRING	1657	Job Grade 57	00016	0.0416	0 0000	00000	\$40.54	\$1 6848	\$1,6848	\$0.000	0000 0\$	1.1920	\$0,000	\$0,000	\$1 6848	\$1 6848
FNGINFERING	4FXX	Service Advocacy Center (SAC)	0,0333	0 0083	00000	0000	\$32.62	\$1 0673	\$0.2718	0000 0\$	0000 0\$	1.1920	0000 0\$	\$0.000	\$1 0873	\$0.2718
FNGINEERING	4N4X	Circuit Provisioning Group (CPG)	0.0825	0.0450	00000	00000	\$33.64	\$2.7753	\$1.5138	\$0.000	0000 0\$	1.1920	0000 0\$	\$0,000	\$2 7753	\$1 5138
FNGINEBING	4M1X	Address & Facility Inventory (AFIG)	0 0400	00400	00000	00000	534.31	\$1,3724	\$1.3724	\$0.000	0000 0\$	1.1920	0000 0\$	\$0.000	\$1 3724	\$13724
CONNECT A TEST	4AXX	Acc Cust Advocate Cntr (ACAC)	0.6390	0 1828	00000	0000	\$38.31	\$24.4801	\$7,0043	0000 0\$	0000 O <b>\$</b>	1 1920	0000 O\$	20,0000	\$24.4801	\$7 0043
COMMECT & TEST	AWXX	Work Management Center (WMC)	0.0333	00000	00000	00000	\$32.76	\$1.0920	\$0.000	0000 O <b>\$</b>	\$0.000	1 1920	0000 0\$	\$0 0000	\$1 0920	0000 0\$
COMMECT & TEST	X11X	CO Install & Mea Field - Citt & Fac	0 1700	0000	00000	0000	£204	\$7.1468	\$3.5734	20 0000	00000	1.1920	\$0.000	0000 0\$	\$7,1468	\$3 5734
CONNECT & TEST	411X	Install & Mice - Spec Sycs (SSIM)	1 5039	0.8539	00000	0.000	¥5.41	\$68.2921	\$38.7756	0000:0\$	\$0.000	1 1920	0000 O\$	\$0,000	\$68 2921	\$38 7756
TPAVE	× ×	Install & Mine - Spec Sure (SSM)	0.3333	0000	00000	00000	\$45.41	\$15,1367	\$0,000	\$0,000	\$0,000	1,1920	0000 0\$	\$0,000	\$15.1367	\$0.000
TYPACE.	•	times a mice - oper core (com												Total	123.6129	54.7416
			installation		Disconnect	75	TELRIC	Fretail		Discorns	t	Disconnect	Discounted Disconnect	sconnect		
	7	JFC/Pavband	Worktimes		Worktimes	•	Labor	3		2000		Discount	Cost		TELRIC	
Essephon	-		First	Additional	First	Additional	Rate	First	Additional	First	Additional	Factor	First	Additional	First	Additional
SEBVICE CIBILER	3.0X	Customer Poin	122	  -	00000	0000	\$31.17	\$0.5455	\$0 5455	0000.0\$	0000 0\$	1 1920	0000 0\$	00000\$	\$0 5455	\$0 5455
FNGINERING	1657	Joh Grade 57	0.0416		00000	0.000	20 52	\$1.6646	\$1 6848	20 0000	20 0000	1 1920	0000 0\$	\$0.000	\$1 6848	\$1 6848
FNGINERING	£XX	Service Advocacy Center (SAC)	0.0333		0.000	0000	\$32.62	\$1.0673	\$0.2718	0000	0000 0\$	1 1920	0000 0\$	\$0,000	\$1 0673	\$0.2718
ENGINEERING	*NAX	Circuit Provisioning Group (CPG)	0.0825	0 0450	00000	00000	\$33 <b>64</b>	\$2,7753	\$1.5138	0000	0000 0\$	1 1920	0000 0\$	0000 O <b>\$</b>	\$2.7753	\$15138
FNGINERING	XIV.	Address & Escility Inventory (AFIG)	00100		00000	0.000	\$34.31	\$1.3724	\$1,3724	0000	0000 05	1.1920	0000 0\$	0000 os	\$1.3724	\$1 3724
COMMECT & TEST	***	Ace Cust Advocate Cott (ACAC)	0 6390		00000	0000	\$38.31	\$24.4801	\$7.0043	0000 0\$	\$0.000	1.1920	0000 0\$	00000\$	\$24 4801	\$7 0043
CONNECT & TEST	AWXX	Work Management Center (WMC)	0 0333		00000	00000	\$32.76	\$1 0920	0000 0\$	0000 0\$	20 0000	1.1920	0000 0\$	0000 os	\$1 0920	0000 0\$
CONNECT & TEST	X127	CO Install & Mice Field - Cit & Fac	0.1700		00000	0.000	\$42.04	\$7.1468	\$3.5734	0000 0\$	0000 05	1.1920	0000 0\$	0000 O\$	\$7 1468	\$3 5734
CONNECT A TEST	¥11X	Install & Mice - Spec Sycs (SSIM)	1.5039	_	00000	00000	<b>245.41</b>	\$68,2921	\$38.7756	0000:0\$	\$0,000	1 1920	0000 0\$	0000	\$68 2921	\$38 7756
TRAVEL	411X	Install & Mice - Spec Svcs (SSIM)	0.3333		0.000	0.000	\$45.41	\$15.1367	\$0.000	20.000	\$0.000	1.1920	\$0,0000	20 0000	\$15,1367	0000 0\$
															123.6129	54.7416

Tennessee A.8.598 - 4-Wire HDSL Compatible Loop (Nonrecurring w/ LMU) - Testing

Nonrecurring Cost

11/9/2000

	TELRIC \$124,8762 \$124,8762 1,0030 \$125,2525 \$125,2525
Additional	Shared Cost \$0.0000 \$0.0000  \$ 0.0000
	Direct Cost \$124.8762 \$124.8762
	TELRIC \$127.2585 \$127.2585 1.0030 \$127.6419 1.0000
First	Shared
	Direct Cost \$127.2585 \$127.2585
	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost

		Ē		
	0-Edf	Disconnect of Additional	\$0.0000 \$0.0000 \$0.0000 Total	Securited Decemnent Coef Additional St 0000 \$1 0000 \$1,000 \$2 0000 \$1,000 \$1,000 Total
	ē	Discounted Discoursed Cost First Addition	0000 08 0000 08	Discounted Co Figure 80.0000 80.0000 80.0000
	ar.	Disconnect Discount Factor	1.1920 1.1920 1.1920	Discount Discount Factor 1,1920 1,1920 1,1920
	6	act Additional	0000 08 00000 08 000000	Additional 80 0000 80 0000 80 0000 80 0000
	E=Bac	Discernant Cost First Ad	0000 05 0000 05 0000 05	Disconnect Cost Strot 80.000 80.000 80.0000
w LMU) - Testing	ધુ	T X	\$71.2866 \$2.3623 \$51.2043	Additional \$71,200 \$2,3023 \$51,2043
eee p (Nonrecurting v	D-Arc	TO COST	\$71.2896 \$4.7645 \$51.2043	Piret Cost 871.2006 84.7645 851.2043
Tennessee A.B.588 - 4-Wite HDSL Compatible Loop (Nonrecuting w/ LMU) - Testing	ບ	Direct Labor Rate	206.33 \$42.04 \$45.41	TELMO Labor Rado \$30.31 \$42.04 \$45.41
H - 4-WET HDS		7 . V	0.0000	0.0000
A.E.S	••	Discorrect Worklimes	0.0000	Disconnect Workthees Workthees 0 0000 0 0000 0 0000
		5 2 3	1.8609 0.0567 1.1278	Additional 1.8608 0.0567
	<	Installation Worktimes	1,860	Pirot Mortelines First Add 1,800 0,1133
		JFC/Payband	Acc Cust Ad CO install & Install & Mic	JFCP syband Description Acc Cast Absocate Cert (ACAC) CO Instal & Mos - Spec Sec (SSIM)
		ğ	XXX	P.C. NCC /

11/9/2000

Tennessee A.8.599 - 4-Wire HDSL Compatible Loop (Nonrecurring w/ LMU) - Disconnect

		TELRIC	\$24.7771	\$24.7771	1.0030	<b>\$24.8518</b>	0000.1	\$24.8518
	Additional	Shared Cost	\$0.0000	\$0.000	×"	;	<b>≺</b> <sup>∥</sup>	
ing Cost		Direct Cost	\$24.7771	\$24.7771				
Nonrecurring Cost	•	TELRIC	\$117.3156	\$117.3156	1.0030	\$117.6691	1.0000	\$117.6691
	First	Shared Cost	\$0.0000	\$0.000	×		×"	
		Direct	\$117.3156	\$117.3156				
11/9/2000			Nonrecurring Cost Development Sheet Col H	Total Cost	Gross Receipts Tax Factor	Cost (including Gross Receipts Tax)	Common Cost Factor	Nonrecurring Economic Cost

			Į	1925	2673	200	282	200	8258	\$0,000	L777		1	¥6.01	22	200		3 3		273	34,000	
	₽+G+4	Direct Cost	Addition	2					_			1	TRILATE	3	. 5							
	±	å	¥.	\$10.5776	\$1.771	22,286	\$22.0263	\$10.6480	<b>\$46</b> .0101	\$10.0432	17.315	1	1	411	1121	20.2		2070.774	200.0480	5	\$18,0432	
		connect	Additional	<b>28</b> .1825	\$0.2873	20.2386	\$2.2803	Z. 9605	\$10.0250	\$0.000	10	connect	-	26 10 36	27.00	5		27.7877		20.016	90000 DE	i i
	0-Erf	Discounted Discounsed Cost	Fred	\$10.5776	\$1.77.18	\$0.2386	\$22.0263	\$10.6466	\$46.0101	\$18.0432		Discounted Disconnect	į	A10 E770	#1 27 14	2	0007700	2270.778	210.6480	746.010	\$18.0432	
	•	Discerned	Factor	1.1020	1.1820	1.1820	1.1820	1.1820	1.1920	1,1920		Discernant	Discount	1000	200			2201	1820	1.1820	1.1820	
	Š	¥.	Additional	\$5.1950	\$0.2243	1002.08	\$1.8156	72.1800	\$9.0620	\$0.000		<b>198</b> 2		ACCOUNT	20.1.00			8	Z.	02 05 05 05 05 05 05 05 05 05 05 05 05 05	\$0.000	
	E-BrC	Disconnect	Į	\$15,5450	\$1,4858	\$0.2001	\$18.4782	25.53	\$36,5065	\$15,1367		Discernaci	<b>3</b>	F	13.3630		20.00	\$18.4782	20.00		\$15.1307	
i ennesses A.8.599 - 4-Wire HDSL Compatible Loop (Nonnecuring w/ LMU) - Disconnect	Ş	3 *	Additional	0000 0\$	\$0.000	\$0.000	0000 DE	\$0.000	20 0000	\$0,000		*	· .	Aceta	8 8	2 2		0000 R	0000 OK	<b>20</b> 0000	20,000	
onrecurring w' Li	DAMC	Part of Control	Ĕ	20,000	\$0.000	0000	20000	\$0.000	80 0000	\$0.000		Te de			0000	2000	200000	888	\$0.0000	0000	<b>\$0</b> 0000	
mpatible Loop (N	υ	Direct	a a	\$1.17	300	20.5	10.903	\$2.0	245.41	145.41		TELMC		Kate				500	<b>24</b> 2.04	7.5%	17:57	
4-Witre HDSL Co		7	Additional	0 1967	0.0067	0.0050	0000	0.0982	0 2000	0000		Ject Ject	ŧ	Additional	0.1967	2000	9000	0.0500	0.0002	0.200	0.000	
A.t. 590	•	Discorned	1	0 5000	0.0442	0.0054	0.4823	0.2125	0.8500	0.3333		Discerned		E	0 2000	0.0442	9000	0.4823	0.2125	0.8500	0.3333	
	∢	Installation	Additional	00000	0000	00000	00000	0000	9000	0000		inflor		Additional	00000	0.000	0000	0.000	0.000	0000	0.000	
		installation	1	0000	0000	00000	0000	0000	0000	0000		hat affellor Worktimes		F	0.0000	0000	0000	0.000	00000	0000	0.000	
			Description	Continues Date Of Contact - ICSCA CSC	Circle Prodeintin Grain (CPG)	Address & Endly Insectory (AFIG)	Ace Case Advancate Cate (ACAC)	CO best & Mine Flad - Cit & Fire	Leader & Marrie Cons Orre (SSIM)	haded & Mare - Spec Sera (SSIM)	(minor) and nade - answer a service		JFC/P syband	Description	Customer Point Of Contact - ICSC/LCSC	Chruit Provisioning Group (CPG)	Address & Fedility Inventory (AFIG)	Acc Cust Advocate Cntr (ACAC)	CO Install & Mice Field - Cld & Fac	Partial & Mice - Spec Secs (SS/M)	Install & Mice - Spec Secs (SSIM)	
		ì		1000	T T T	VIII.	AAAA	XIV.	?		•		Š	Peyband	230X	ŽŽ.	4M1X	4AXX	431X	X11X	411X	
	11/9/2000		Franklan	VOIL DIVINOS	CANCED BACK	ENDINEERING	COMMENT & TEST	COMMENT & TEST	COMMENT & TEST	TRAVE!	ועאנו			Function	SERVICE INQUIRY	ENGINEERING	ENGINEERING	CONNECT & TEST	CONNECT & TEST	COMMECT & TEST	TRAVEL	

Tennessee A.8.698 - 4-Wire HDSL Compatible Loop (Nonrecurring w/o LMU) - Testing

Nonrecurring Cost

	TELRIC \$124.8762 \$124.8762 1.0030 \$125.2525 1.0000 \$125.2525
Additional	\$0.0000   \$0.000
	Direct Cost \$124.8762 \$124.8762
	TELRIC \$127.2585 \$127.2585 1.0030 \$127.6419 1.0000
First	Shared
	Direct Cost \$127.2585 \$127.2585
	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost

Fig. 2   Fig. 3   Fig. 4   Fig. 5   F					8 •	A.B. 686 - 4-WITE TILDL. COMPANIES LOOP INCINECUTING W/O LMU) - 1 650/19	Companione Loop	None de la companya d								
Procession   Pro			∢		6		ပ	D=AxC		E=8xC		u.	G=ExF		H=D+G	
Moritimes			installs	tion	Disconn	<b>.</b>	Direct	Hatell		Disconnec		Disconnect	Discounted Dis	connect	;	
First   Additional   First   First   Additional   First   First   Additional   First		JFC/Payband	Workt	302	Worktin		Labor	3				Discount	0 0 0 0		•	*
1,860   1,860   0,000   0,000   518,31   517,296   57,026   5,000   5,000   5,000   5,000   57,296   57,026	_	Description	First	Additional	First	Additional	Rate	E	Additional			Factor		Additional		Additional
1.1276	AAXX Acc C	List Advocate Cotr (ACAC)	1.8609	1 8609	0000	00000	\$38.31	\$71.2896	\$71.2896		\$0.000	1.1920	0000.0\$	0000.0\$		\$71 2896
1.1276   1.1276   0.0000   0.0000   \$45.51   \$51.2043   \$51.2043   \$50.0000   \$9.00000   1.1920   \$9.0000   \$51.2043   \$51.2043   \$12.2043	9	Setall & Mice Field - Ckt & Fac	0 1133	0.0567	00000	0000	\$42.04	\$4.7645	\$2,3823	0000 0\$	\$0.000	1.1920	\$0.000	\$0,000		\$2 3823
Total 1272585   Total 1272595   TELRIC   Install   TELRIC   Install   TELRIC   Install   TELRIC   Install   TELRIC   Install   TELRIC	1	A Mice - Spec Suce (SSIM)	1 1278	1 1278	0000	00000	\$45.03	\$51,2043	\$51,2043	\$0.000	20 0000	1,1920	0000 0\$	\$0,000		\$51 2043
Heratilation   Disconnect   TELRIC   Install   Disconnect   Cost   Cost   TELRIC   Cost   Disconnect   Disconnect   Cost   Disconnect   Disconnect   Cost   Disconnect   Disconnect   Cost   Disconnect   Disconnect   Cost   Disconnect   Discon		(wice) and rade . and a												Total		124.8762
Hindeliation   Disconnect   TELRIC   Install   Disconnect   Disconnect   Disconnect   Discounted Disconnect   Discounted Disconnect   Discounted Discoun																
Worktines         Worktines         Labor         Cost         Cost         Cost         Cost         Cost         Cost         TELRC           First         Additional			Installs	tou	Discond	t)	TELRIC	Install		Disconner		Disconnect	Discounted Dis	connect		
First Additional Firs		JFC/Payband	World	100	Worklin		ogen	<b>18</b> 03		Š		Discount	200 C		윭	
1 8678         1 8678         0 0000         0 0000         538 31         \$71 2896         \$71 2896         \$0 0000         \$0 0000         \$10 0000         \$0 0000         \$0 0000         \$10 0000<	Parchand	Description		Additional		Additional	Rate	First	Additional		Aditional	Factor	First	Additional		Aditional
0 1133 0 0567 0 0000 0 0 0000 \$42.04 \$4.744 \$2.3823 \$0.0000 \$0.0000 11920 \$0.0000 \$0.0000 \$4.7645 11.276 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AAXX Acr	Cust Adversale Colt (ACAC)	1 8608	1 8609	1	00000		\$71.2896	\$71.2896	0000 0\$	0000 0\$	1.1920	0000 0\$	0000 0\$	\$71.2896	\$71 2896
11276 1.1276 0.0000 0.0000 545.41 \$51.2043 \$51.2043 \$0.0000 \$0.0000 1.1920 \$0.0000 \$51.2043 1223385		Cotall & Lifton Finals - Citi & Fac	0 1133	0 0567		00000		54 7645	\$2,3823	\$0,000	\$0.000	1.1920	0000 O\$	\$0.000	\$4 7645	\$2 3823
Total 127 2845		P Mary Come Sine (CCIM)	1 1278	11276		00000		\$51 2043	\$51 2043	\$0,000	\$0,000	1.1920	00000	20 0000	\$51 2043	\$51.2043
		a mice - spec sve (ssim)												Total	127,2585	124.8762

Tennessee A.8.699 - 4-Wire HDSL Compatible Loop (Nonrecurring w/o LMU) - Disconnect

Nonrecurring Cost

11/7/2000

	\$19.2348 \$19.2348 \$19.2348 1.0030 \$19.2928 1.0000
Additional	Shared Cost \$0.0000 \$0.0000 X
	Direct Cost \$19.2348 \$19.2348
	\$99.3883 \$99.3883 1.0030 \$99.6877 1.0000
First	Shared Cost \$0.0000 \$0.0000 ×
	Direct Cost \$99.3883
	Nonrecurring Cost Development Sheet Cot H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost

							The second									
11/7/2000			<		6		ပ	D=AxC	O	E=BxC	υ	u	G=ExF	ų	9∙0=H	
			Installation	. woji	Disconnec	15	Direct	Install		Disconnect	Ţ	Disconnect	Discounted Disconnect	faconnect	o di di	•
	JFC.	•	Worktime	·	Worldime		200	<u>.</u>			Additional	Factor	Elect C	Actibiograf	in i	Additional
Function	Payband	1	Ē	ADDRIOUS	Ē	ADDICTOR N	N. N.		AMERICAN		A CALL	1		2020	PO SECO	60.5603
SERVICE ORDER	230X	Customer Point Of Contact - ICSC/LCSC	0000	00000	0.0175	0 0 1 7 5	21.17	20.000	0000	20.04.00	200	0.78	7009.04	7009.04	70000	ZOCO ON
ENGINEEDING	ANAX	Circuit Dimensional Group (CBG)	0000	00000	0.0442	0.0067	\$33.64	0000:0\$	0000 0\$	\$1.4858	\$0 2243	1.1920	\$1 7711	\$0.2673	\$1 7711	\$0 2673
		Address & Escribe President (AFIC)	0000	00000	0.005	0.0058	534.31	\$0,000	\$0,000	\$0,2001	\$0.2001	1.1920	\$0.2386	\$0.2386	\$0.2386	\$0.2386
COMMECT & TEST	7744	Account Advanta Cat (ACAC)	0000	0000	0.4823	0000	\$38.31	20 0000	20 0000	\$18.4762	\$19155	1.1920	\$22,0263	\$2,2833	\$22 0263	\$2 2833
COMMECT & TEST	<b>X</b>	CO business & Marco Girds - Okt & Earl	9000	00000	0.2125	0.0982	242.04	20 0000	20 0000	\$8 9335	<b>54</b> .1690	1 1920	\$106489	Z 9695	\$10 6489	\$4 9695
CONNECT & LEST	< ? ·	CONTRACTOR OF THE CALL OF THE	800	9000	0.8500	0 2000	252	00000\$	20 0000	\$38,5985	\$9 0820	1.1920	\$46.0101	\$10.8259	\$46 0101	\$10 8259
CONNECT & IEST	< ;	THE STATE OF STATE OF STATE ST		00000	0.333	0000	245.41	00000\$	00000\$	\$15,1367	20 0000	1.1920	\$18.0432	0000 0\$	\$18.0432	0000 0\$
IKAVEL	<u> </u>	THE COMMISSION OF THE COMMISSI	2000											Total	99.3683	19.2348
			retaffation	5	Disconnec	7	TELRIC	Install		Disconn	ij	Disconnect	Discounted Disconnect	<b>Secondary</b>		
	7	HC/Pachand	Worktime	1	Worktime		Lebor	200		Cost		Discount	Coet	_	TELRIC	
			First	Additional	First	Additional	Rate	First	Additional	First	Additional	Factor	First	Additional	First	Additional
CEDIACE CONCO	AUGC	Cuelomer Boar	00000	0000	0.0175	0.0175	\$31.17	0000 0\$	0000 0\$	\$0.5455	\$0.5455	1.1920	\$0.6502	\$0.6502	\$0.6502	\$0 6502
SERVICE UNDER	, A. A.	Clearly Decisioning Group (CDG)	0000	0000	0.0442	0 0067	\$33.64	\$0,000	0000 0\$	\$1.4858	\$0 2243	1.1920	\$1,7711	\$0.2673	\$1,7711	\$0 2673
CHICEPHO		Address & Escales Instantons (AEIS)	00000	0000	0.0058	0.0058	534.31	0000 0\$	00000	\$0.2001	\$0 2001	1.1920	\$0.2386	\$0.2386	\$0 2386	\$0.2386
COMMECT 8 TEST	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Account Actionals Cate (ACAC)	00000	0000	0.4823	00000	\$38.31	00000	0000 0\$	\$18 4782	\$1.9155	1.1920	\$22 0263	\$2 2833	\$22 0263	\$2 2833
COMMECT & LEST	***	CO trace # After Field - Chi & Far	00000	0000	0 2125	0.0992	242.04	000000\$	0000 0\$	\$8 9335	74.1890	1.1920	\$10,6489	C696 X	\$10 6489	\$ 3696 \$
CONNECT & LEST	2	Install & Mann - Cone Store (SCIM)	00000	0000	08200	0.2000	245.43	0000.0\$	\$0.0000	\$38.5965	\$9.0820	1.1920	\$46 0101	\$10.8259	\$46 0101	\$10 8259
TOTAL STEEL		Letter & Mary Court (SCHA)	9000	00000	0 3333	0000	245.41	20 0000	20,000	\$15,1367	0000 OS	1.1920	\$18.0432	\$0.000	\$18 0432	0000
INAVEL	•	THE STATE OF THE COLOR OF THE STATE OF THE S	-											Total	99 3463	19.2348

Tennessee A.13.8 - 2-Wire Copper Loop - short (Nonrecurring w/ LMU)

Nonrecurring Cost

11/7/2000

	\$74.6733 \$74.6733 1.0030 \$74.8983 1.0000	
Additional	Shared Cost \$0.0000 \$0.0000  *  *  *  *  *  *  *  *  *  *  *  *	
	Direct Cost \$74.6733 \$74.6733	
	\$186.7809 \$186.7809 1.0030 \$187.3437 1.0000	
First	Shared	
	Direct Cost \$186.7809 \$186.7809	
	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost	

	9+Q=H	Direct Cost First Additional 527 2054 \$11 4706	\$23.3775 \$5.165-0 \$18.6476 \$1.6475 \$13.617 \$3.782 \$13.773 \$1.3724 \$13.773 \$1.3724 \$22.647 \$5.4719 \$7.1468 \$3.5749 \$15.5269 \$25.654 \$15.137 \$0.0000	TELRIC Additional S27 2054 \$11 4706 \$15 21 4706 \$15 1907 \$1 470 \$
	G=Exf	Discounted Disconnect Cost Additional First Additional Forces	-	4 Disconnect cet Additional 80 0000
	Ö	Discounted C First	0000 05 0000 05 0000 05 0000 05 0000 05 0000 05	Fig. 10 0000 8
	u.	Disconnect Discount Factor	1.681 1.681 1.681 1.681 1.681 1.681 1.681 1.681	Discounset Discounset 11681 11681 11681 11681 11681 11681 11681 11681 11681
	Q	3	0000 03 0000 03 0000 03 0000 03 0000 03	# # Additional # 50 0000
	E=BxC	Disconnect Cost First Ac	0000 03 0000 03 0000 03 0000 03 0000 03 0000 03 0000 03 0000 03	Electronsect Cost A First Form A Month of the Cost St. Co
(CMC)	υ	Ž	\$11.4706 \$1.6470 \$1.6470 \$1.3724 \$5.4719 \$0.0000 \$3.5734 \$2.5854	Additional 511706 8114706 8114706 8114706 8114706 8114706 8114704 8114724 8114
(Nonrecurring w	D=AxC	Install Coet First	\$23 2054 \$23 3775 \$16 8476 \$13 5127 \$1 3724 \$1 3724 \$1 1468 \$5 3669 \$15 1367	First Cost   St. 7755   St. 775
enneases   A.13.8 - 2-Wire Copper Loop - short (Norrecurring w/ LMU)	v	Direct Labor Rate	251-7 240-7 240-5 250-5	TELRC Labor Rate \$11.7 \$11.7 \$10.5 \$20.5 \$30.5 \$30.5 \$40.5 \$40.5 \$30.5 \$40.5 \$
.13.8 - 2-Whre Co		et es Additional	0000 0 0000 0 0000 0 0000 0 0000 0 0000 0 0000 0	Additional Additional C0000 0 00000 0 00000 0 00000 0 00000 0 0
•	80	Disconnect Worktimes First Ac	9000 0 9000 0	Disconnect  Wortkinse  First  Wortkinse  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
		on Meditional	0 2242 0 1667 0 1667 0 0633 0 0400 0 1428 0 0000 0 0650 0 0660	Additional
	∢	Installation Worktimes	0 5317 0 7500 0 7500 0 3333 0 0025 0 6000 0 6900 0 1 2 193 0 3333	Presidention  Worktimes  Worktimes  Worktimes  0.5317  0.5317  0.4156  0.0400
		JF C.PP ayband	Systems Designer wishes Con- Customer Point Of Contact - ICSCA.CSC 4-b Grade 57 4-b Grade 57 Circuit Provisioning Group (CPG) Address 6 Facility Inventory (AF(s) Address 6 Facility Inventory (AF(s) Contact 8 Milos Field - Cht 8 Fac Contact 8 Milos Field - Cht 8 Fac Invest 8 Mice Field - Cht 8 Fac Invest 8 Mice - Spec Syst (SSM)	JF C/Peyband Description Description Description Description Custome Porn (of Contact - ICSC/CSC Abb Grade S7
		J.C.	SDWC (230WC )))))))))))))))))))))))))))	JFCJ SOWC 200WC 200WC 200WC 200WC 200WC 200WC 4MAX 4MAX 4MAX 4MAX 4MAX 4MAX 4MAX 4MAX
	0002/2/11	;	SERVICE INQUIRY SERVICE INQUIRY SERVICE NOURY ENGINEERING ENGINEERING ENGINEERING ENGINEERING CONNECT & TEST CONNECT & TEST TRAVEL	FUNCTION SERVICE INQUIRY SERVICE INQUIRY ENGINEERING ENGINEERING ENGINEERING ENGINEERING ENGINEERING ENGINEERING CONNECT & TEST CONNECT & TEST CONNECT & TEST

Nonrecurring Cost Development

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Tennessee A.13.9 - 2-Wire Copper Loop - short (Nonrecurring w/o LMU)

			TELRIC	\$40,2840	\$40.2840	1.0030	\$40.4054	1.0000	\$40.4054
		Additional	Shared	\$0.000	\$0.000	<b>×</b>		×	
	ing Cost		Direct Cost	\$40.2840	\$40.2840				
	Nonrecurring Cost		TELRIC		\$109.1553	1.0030	\$109.4842	1.0000	\$109.4842
•		First	Shared Cost	\$0.000	\$0.000	×		*	
				\$109.1553	\$109.1553				
	11/7/2000			Nonrecurring Cost Development Sheet Col H	Total Cost	Gross Receipts Tax Factor	Cost (including Gross Receipts Tax)	Common Cost Factor	Nonrecurring Economic Cost

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		Ŧ		CO CAER	61 6848	£0 2748	61 6130	61 1724	65 4710	60000	20000	2000	000 074	00000	40.2840		_		\$0 5455	\$1 6648	\$0 2718	\$15138	\$1 3724	\$5 4719	0000	\$5.00 A	0000 0\$	40.2840
	9•Q=H	Direct Cos	Direct Co	185	C1 6848	51.0873	577.53	K1 1724	223 0477	61 0020	0350	0041 /4	8000 CC#	\$15.1367	109.1553		TELRIC	First		\$1,6648	\$1.0873	\$2.7753	\$1 3724	\$22 9477	\$1 0920	\$7.1408	\$15.1367	109.1553
		Discounted Disconnect Cost	Additional	SO OTO	20,000	000005		00000	20 0000	00000	0000	0000	00000			1		Additional	0000 0\$	00000	0000 0	0000 0	00000	000000	00000		0000 0	Total
	G=ExF		Discounted Dis	First	00000	00000	00000	0000 05	20 0000	00000\$	20 0000	0000	9000	0000	0000		Discounted Discounted	Š	First	0000 0\$	\$0,000	00000	0000 05	0000 04	00000	00000		0000 05
	ш	Disconnect	Factor	1.1683	1681	1 1681	1.1681	11681	1.1681	11681	1 1681	1681	1681	1001		Disconnect	Discount	Factor	1 1681	1.1681	1.1681	1991	1991	100	9 5		1.1681	
	ũ	nect	Additional	0000 0\$	\$0,000	\$0,000	0000 0\$	\$0,000	0000 0\$	\$0,000	\$0,000	20 0000	0000			7	_	Additional	\$0,000	0000	20000	00000	00000	800	2000	20 0000	0000 0\$	
	E=BxC	Disconnec	Fra	0000.0\$	\$0.000	0000 o <b>\$</b>	00000\$	\$0.000	\$0,000	\$0.000	\$0,000	\$0,000	50,000	200		Discon		Fret	00000	0000 05	00000		9000		20 000	20,000	\$0,000	
A.13.9 - 2-Wire Copper Loop - short (Nonrecurring w/o LMU)	Q <sub>n</sub>	1 2	Additional	\$0 5455	\$1.6848	\$0.2718	\$1.5130	\$1.3724	\$5.4719	0000 0\$	\$3.5734	\$25.8504	20 0000			=		Additional	20.5455	21 0948	B1 /2 /2	£1 1724	65.47.10	00000	\$3.5734	\$25.8504	\$0.0000	
	D≂AuC	Install	Firet	\$0.5455	\$1.6848	\$1 0873	\$2.7753	\$1 3724	\$22 9477	\$1,0920	\$7.1488	\$55 3669	\$15,1367			hrstall		ž.	200	21 0046	£27753	\$1.3724	\$22 0477	\$1.0920	\$7.1468	\$55.3669	\$15,1367	
opper Loop - sho	ပ	Direct Labor	Rate	\$31.17	7.0 2.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3	\$32.62	233.64	£34.31	\$38.31	\$32.76	<b>2</b> 5 04	\$45.41	<b>245</b> 41			TELRIC	Lebo	Kare	2 2 2	600	70 75	234.31	\$38.31	\$32.76	<b>\$4</b> 2.04	<b>25</b>	<b>25.</b>	
A.13.9 - 2-Wire C	62	nnect	Additional	0000	00000	00000	00000	0000	0000	00000	0000	00000	0000			mect	mee	ADDIRIONAL	9000	0000	00000	00000	00000	00000	00000	00000	0.0000	
	•	Disconnect Worktimes	First	00000	00000	00000	00000	00000	0000	0000	00000	00000	0000			Disconnect	Worltimes	0000	9000	9000	00000	00000	00000	00000	0000	0.000	00000	
	<	flon	Additional	0.0175	91418	0 0063	0.0420	00400	0.1428	0000	0.0850	0 5693	0000			tlon	200	30.00	250	2000	00450	0.0400	0.1428	00000	0.0850	0.5693	0.0000	
•	`	Installation Worktimes	First	0.0175	9000	0.0333	0.0025	00000	0886.0	0.0333	0.1700	1.2193	0 3333			Installation	Worktimes	36300	6190	0.033	0.0825	0 0400	0.5990	0.0333	0.1700	1.2193	0.3333	
		JFC/Payband	Description	Customer Point Of Contact - ICSCALCSC	Special At 197	Service Advocatory Center (SAC)	Circuit Provisoning Group (CPG)	Accounts to 1 activity investigacy (Acris)	ACCURATION CORP. (ACAC)	Work Management Center (WMC)	CO metan a Mica Head - Citi s Pac	Frailed & Mitce - Spec Svcs (SSIM)	FIREIR & MICE - Spec SVCB (SSBM)				JF C/P ayband	Customer Point Of Contact MCCC Con	Job Grade 57	Service Advocacy Center (SAC)	Circuit Provisioning Group (CPG)	Address & Facility Inventory (AFIG)	Acc Cust Advocate Cnir (ACAC)	Work Management Center (WMC)	CO Install & Mice Field - Citt & Fac	Install & Mice - Spec Svcs (SSIM)	Install & Mice - Spec Svcs (SSIM)	
		JEC.	Payband	230X	200	3	7.00	****	AMA.	7314	¥ ?	<u> </u>	¥			ì	Parchand	7.00X	JGS7	4FXX	4N4X	4M1X	4AXX	4WXX	431X	¥ :	×.	
	11/7/2000	:	Punction	FNCINEEDING	ENGMERBING	FNGMERDAG	ENGMERDING	CONNECT & TEST	COMMECT & TEST	CONNECT & TEST	CONNECT & TEST	TOWNED I EST	- WAVEL				Function	SERVICE ORDER	ENGINEERING	ENGMEERING	ENGINEERING	ENGINEERING	CONNECT & TEST	CONNECT & TEST	CONNECT & TEST	CONNECT & TEST	IRAVEL	

Tennessee A.13.10 - 2-Wire Copper Loop - Iong (Nonrecurring w/ LMU)

11/7/2000

Nonrecurring Cost

				1.0030	\$74.8983	\$74.8983
Additional	Shared Cost	\$0.000	\$0.0000	×	×	
	Direct Cost	\$74.6733	\$74.6733			
	TELRIC	\$186.7809	\$186.7809	1.0030	1.0000	\$187.3437
First	Shared Cost	\$0.000	<b>\$</b> 0.0000	•	*	
		\$180.7809	\$186.7809			
	Nonrecurring Cost Development Chart Col L	Total Cost	Gross Receipts Tax Factor	Cost (including Gross Receipts Tax)	Common Cost Factor	Nonrecurring Economic Cost

			ost Additional	\$114706	\$5 1950	\$16.8478	\$1 5138	\$13724	\$5.4719	\$3 5734	\$25 8504	74.6733			1	\$11.4706	\$5 1950	\$16 8476	\$3 3782	\$1513B	\$5.4719	\$0 0000	\$3 5734	\$25 8504	74.6733	
	H=D+G	! i	Direct Cost	2054	\$23.3775	\$16.8476	\$2 7753	\$1 3724	\$22.9477	\$7.1468	\$55.3669	\$15.1367 186.7809			TELRIC	\$27 2054	\$23 3775	\$16 8476	\$13 5127	\$1.724	\$22 9477	\$1 0920	\$7.1468	\$55.3669	186.7809	
		onnect	connect	nnact dittonal	0000.0\$	00000	00000	0000 0	\$0 0000	90000	00000	0000 0\$	\$0 0000 Total		onnect	Additional	\$0.000	\$0,000	0000 0\$	00000	00000	\$0 0000	00000	0000 0\$	0000	Total
	G=ExF	Discounted Disconnect		8	0000 0\$		0000.0\$	0000 05	0000	0000 0\$	0000 0\$	00000		Discounted Disconnect	See Const	00	\$0.0000	0000 0\$	00000	0000 05	0000 08	0000 08	0000 05			
	L	Disconnect	Factor	1.1681	199	8	1981	1.1681	1881	1891	1.1681	8		Disconnect	Discount	1.1681	1.1681	1581	1001	1891	1,1661	1.1681		8 5		
			Additional	0000 0\$	00000	00000	0000 05	0000 05	00000	\$0,000	0000 0\$	0000			Additional	0000 0\$	00000	00000		\$0,000	\$0.0000	0000.0\$	00000	00000		
BX	0000 0	00000	\$0,000	0000.0	0000	i	Disconnect	First	8	20000	0000	00000	0000 0\$	0000 0\$	00000	00000	0000 0\$									
### Additional #### \$11.4706 \$11.4706 \$15.1800 \$1.57.24 \$1.57.24 \$1.57.24 \$1.57.24 \$2.57.34 \$2.5.50.0000 \$2.00000 \$2.00000						Additional	\$11.4706	\$5.1950	\$1 37.82	\$1,5138	\$1 3724	\$5.4719	20,000	\$25,850x	\$0.000											
evelopment (Nonsecuring w	D≃AuC	Instail	First	\$27.2054	\$16.8476	\$13.5127	\$2.7753	\$1.3724	\$1,0920	\$7 1468	\$55.3 <b>6</b> 69		•	metall Cost	First	\$27.2054	\$23.3775	\$13.5127	\$2.7753	\$1.3724	\$22.9477	27.1469	\$55,3669	\$15.1367		
Nonrecurring Cost Development Tennesse A13.10 - 2-Wire Copper Loop - long (Nonrecurring w/ LMU)	ပ	Direct Labor	Rate	\$51.17	202	202	\$33.64	25.5	\$32.76	\$42.04	Z 2 Z			- Terror	Rate	\$51.17	231.17	100	\$33.64	\$34.31	<b>538.3</b> 1	27.7	245.41	\$45.41		
Nonre A13.10 - 2-848-6 C		¥ \$	Additional	00000	0000	00000	00000	0000	0000	00000	0000		1	<b>.</b>	多	0.0000	0000	0000	00000	0.0000	0000	0000	00000	0.0000		
:	65	Disconnect Worktimes	First	00000	0000	0 0000	00000	0000	0.0000	00000	00000		č	Worktime	First	0000	0000	0000	00000	00000	00000	00000	0000	0.000		
•		Hos.	Additional	0.2242	0.4156	0.0833	0.0450	0.1428	00000	0.0850	00000		3	š <b>1</b>	즃	0.2242	9150	0.0633	0.0450	00400	0.1428	0.0000	0.5693	0.000		
	<	Installation	First	0.7500	0.4156	0 3333	0.0825	0.5990	0.0333	0.1700	0.3333		e de la constante de la consta	Worktimes	First	0.5317	0.4156	0 3333	0.0825	0.0400	0.5990	0.1700	1.2193	0.3333		
		JFC/Payband	Description	Systems Couprier wishes Com Customer Point Of Contact - ICSCALCSC	Job Grade 57	Job Grade 57	Circuit Provisioning Group (CPG) Address & Facility Investory (AFIG)	Acc Cust Advocate Cnfr (ACAC)	Work Management Center (WMC)	CO Install & Mice Field - Ckt & Fac	install & Mice - Spec Svcs (SSIM)			JFC/Payband	Description	Systems Designer wiSales Com Customer Bring Of Course J DSCA CO.	Job Grade 57	Job Grada 57	Circuit Provisioning Group (CPG)	Address & Facility Inventory (AFIG)	Mode Management Control (MAAC)	CO Instalf & Mice Field - Cit & Fac	Install & Mice - Spec Svcs (SSIM)	Install & Mice - Spec Svcs (SSIM)		
		JFC.	Payband	30X	1657	1657	4N4X	4AXX	4WXX	431X	¥ .			JFC.	Payband	SOWC 230X	1G57			XIV		-		411X		
•	11/7/2000		SERVICE INCLIRA	SERVICE INQUIRY	ENGINEERING	ENGINEERING	ENGINEERING	CONNECT & TEST	CONNECT & TEST	CONNECT & TEST	TRAVEL				Function	SERVICE INCURY	ENGINEERING	ENGINEERING	ENGINEERING	COMMECT & TEST	CONNECT & TEST	CONNECT & TEST	CONNECT & TEST	TRAVEL		

Tennessee A.13.11 - 2-Wire Copper Loop - Iong (Nonrecurring w/o LMU)

Nonrecurring Cost

11/7/2000

	\$40.2840 \$40.2840 \$40.2840 1.0030 \$40.4054 1.0000
Additional	Shared Cost \$0.0000 \$0.0000
	Direct Cost \$40.2840 \$40.2840
	\$109.1553 \$109.1553 \$109.1553 1.0030 \$109.4842 1.0000
First	Shared Cost \$0.0000 \$0.0000 ×
	Direct Cost \$109.1553
	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost

					•	.13.11 - 2-Wire C	L13.11 - 2-Wire Copper Loop - long (I	(Nonrecurring w/o LMU	io LMU)							
11772000			∢		60		ပ	D=AxC	ú	E=BxC	U	u.	G=ExF	r.	9•Q≈H	
Function	JFC/	·	Installation Worktimes	5	Disconnect	¥ 1	Direct	Install		Disconnect	Į.	Disconnect	Discounted Disconnect Cost	teconnect t	Direct Cost	¥
OJOGO JONOSO	1000	T	ž	Additional	Frai	Additional	Rate	First	Additional	Ę	Additional	Factor	Į.	Additional	Firet	Additional
SERVICE ORDER	X007	Customer Point Of Contact - ICSC/LCSC	0.0175	0.0175	0000	0000	\$31.17	\$0.5455	\$0.5455	00000\$	00000	1 1681	0000	00000	20 6466	ACCITION A
ENGINEERING	Š	Job Grade 57	0.0416	9110	0000	0000	240 St	\$16848	S.1 FRAR	50000	5		200	90000		
ENGINEERING	4FXX	Service Advocacy Center (SAC)	0.0333	0 0083	00000	00000	\$32.62	\$1.0873	\$0.2718			90.	00000	00000	\$1 6648	\$1 6848
ENGINEERING	AN4X	Circuit Provisioning Group (CPG)	0.0825	0 0450	00000	0.0000	\$33.64	\$2 7753	\$15138	0000		1001	00000	00000	5/9014	\$0.27.18
ENGINEERING	4M1X	Address & Facility Inventory (AFIG)	00400	0.0400	00000	00000	2.73	AC 17.24	ACT 1724	9000	9000	001	0000	2000	27/23	\$15136
CONNECT & TEST	4AXX	Acc Cust Advocate Cntr (ACAC)	0.5990	0.1428	00000	0000	C38 31	\$33 0477	65.17.0	00000	00000	1991	20000	0000 05	\$1 3724	\$13724
CONNECT & TEST	4WXX	Work Management Center (WMC)	62200	0000	0000	9000	92 00	2000	B 4000	2000	200.00	1991	00000	0000	\$22 9477	\$5.4719
CONNECT & TEST	431X	CO Install & Libra Field - Cit & Ear	2000	9000	888	00000	937.10	0750 14	0000 03	0000 05	00000	1.1681	0000 0\$	00000\$	\$1 0920	\$0,000
CONNECT & TEST		formal d Atom Come C. and Cont.	800	0000	0000	0000	75.0	27.1468	\$3.5734	00000	20 0000	1 1681	\$0,000	20 0000	\$7.1468	K3 57.34
TPAVE		MINISTER & MINISTER CONCER (DOMA)	200	5896.0	0000	0000	¥3.	\$55 3669	\$25.8504	00000	\$0.000	1.1681	\$0.000	\$0,000	\$55 3669	\$25.850a
- NAVEL	•	RIBERRI & MICO - Spec Svcs (SSRM)	0.3333	00000	00000	0000	<b>24</b> 5.41	\$15,1367	\$0.000	\$0,000	\$0.000	1.1681	20 0000	00000	\$15 1367	0000
														Total	109 1553	40.2840
					i											
	/PC/	FC/Perhand	Management	£ :	Disconnect	<b>u</b> :	TELRIC	Install	_	Disconnect	Ţ	Disconnect	Discounted Disconnect	sconnect		
Function	Parthand	_	Eleat.	Addition	Elmi Archine			Š		5		Discount	Coe		TELRIC	
SERVICE ORDER	230X	Companies Poin	1 1 1 1 1 1	A D L TE	1	ADDRIONAL	Kare	1	Additional	Fred	Additional	Factor	First	Additional	First	Additional
ENGINEERING	1657	Joh Grada 57		9190	9000	0000	2	200	200	0000 0\$	0000	1 1681	20 0000	0000.0\$	\$0 5455	\$0.5455
ENGINEERING	4FXX	Service Advancecy Capter (SAC)	200		0000	0000	T S	21.0040	51 6848	00000	0000 0\$	1661	0000 0\$	\$0.000	\$1 6848	\$1 6848
ENGMERSHIP	AMAX	Circle Designation Commercial	2000	2000	0000	00000	70.75	510673	\$0.2718	000003	0000 os	1681	0000 0\$	20 0000	\$1 0873	\$0.2718
CHACHACHAC	W.Y	Address & Coult Investor (ACC)	0.000	0000	0000	00000	233.64	\$2.7753	\$1.5138	20,000	0000 O\$	1.1681	0000 0\$	\$0,000	\$2.7753	\$15136
COMMENT & TEST	***	And Course as racinity investigate (Acres)	0.0400	0000	0000	00000	E 75	\$1.3724	\$1.3724	0000 0\$	0000 OS	166	0000 05	0000 0\$	\$1.3724	\$1.3724
COMMECT & TEST		ACC CLUS ACMOCINE COR (ACAC.)	0880	0 1428	00000	0000	\$38.31 15	\$22.9477	\$5.4719	00000	0000 0\$	1.1681	20 0000	00000\$	\$22 0477	45.4710
COMMECT & TEST	<b>X</b>	Work Management Center (WMC.)	0.0333	00000	0000	00000	\$32.76	\$1 0920	0000.0\$	20.000	0000.0\$	1.1681	0000 05	00000	S1 0920	0000
CONNECT & TEST	X124	CO INSULA MICE PART - CRI S. PSC	0.1700	0.0850	0000	0000	<b>2</b> 2.07	\$7 1468	\$3.5734	0000 0\$	20 0000	1.1661	0000 05	00000	\$7 1468	£1.5734
TRANCI	× ;	FIREIGN & MAICH - Spec SVCB (SSIM)	1.2193	0.2683	0000	0000	<b>2</b> 25.41	\$55,3669	\$25,8504	\$0,000	\$0,000	1,1681	\$0,000	00000	£55.3660	475 BS04
ועאני	¥11.	Install & Mice - Spec Svcs (SSIM)	0.3333	00000	0.0000	0000	<b>27</b> 5.41	\$15,1367	0000 O\$	00000	\$0.000	1.1681	20 0000	\$0.0000	\$15,1367	00000
																,

Tennessee A.13.898 - 2-Wire Copper Loop - short (Nonrecurring w/ LMU) - Testing

Nonrecurring Cost

11/7/2000

	TELRIC \$67.5461 \$67.5461 1.0030 \$67.7496 1.0000
Additional	Shared  Cost \$0.0000 \$0.0000  \$0.0000  X  X
	Direct Cost \$67.5461 \$67.5461
	\$69.9283 \$69.9283 \$69.9283 1.0030 \$70.1390 1.0000
First	Shared Cost \$0.0000 \$0.0000
	Direct Cost \$69.9283 \$69.9283
	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost

			Additional \$31 0276 \$2 3823 \$34 1362 67.5481	ditional \$31 0276 \$2 3823 \$7.5461
	Е0=H	_	i i	<u>2</u>
		ō i	\$31.0276 \$4.7645 \$34.1362 69.9283	First \$31 0276 \$4 7845 \$34.1362 \$94.1362
	ų,	aconnact	### Additional ### \$0.0000 \$0.0000 \$0.0000 Total	Additional \$0 0000 \$0 0000 Total
	G=ExF	Discounted Disconnect Cost	\$0 0000 \$0 0000 \$0 0000	Discounted Disconnect  Cost First \$0.000 \$0.000 \$0.000 \$0.000 \$0.000 \$0.000 \$0.000 \$0.000 \$0.000 \$0.000 \$0.000 \$0.000
	u.	Discount Discount	1.1681	Disconnect Discount Factor 1 1881 1 1681
	Ų	<b>1</b>	\$0,000 \$0,000 \$0,000 \$0,000	Additional \$0.0000 \$0.0000 \$0.0000
	E≠BxC	Disconnect Cost	0000 08	Disconnect Cost Addity 80 0000 80 80 0000 80
/ LMU) - Testing	Ų	Additional	\$310276 \$23623 \$34.1362	Additional \$31,0276 \$2,3623 \$34,1362
(Nonrecurring w	D=AkC	histall Coet	\$31.0276 \$4.7645 \$34.1362	Install Cost 53.1 0276 \$3.1 0276 \$4.7645 \$3.4 1362
A. 13.888 - 2-Wire Copper Loop - short (Nonrecurring w/ LMU) - Testing	ပ	Direct Labor Rate	\$42.04 \$42.04 \$45.41	TELRIC Labor Rate: \$38.31 \$42.04 \$45.41
3.888 - 2-Wire Co		es Additional	00000	Additional
	60	Disconnect Worktimes First Ad	0000 0 0000 0	Disconnect Worktimes Worktimes 0 0000 0 0000
		ion Nes Additional	0.8089 0.0567 0.7517	on Additional 0.8099 0.0567 0.7517
	∢	installation Worktimes First Ac	0.0099 0.1133 0.7517	Mortilmes Worldines First 0.0099 0.1133 0.7517
		JFC/Payband Description	Acc Cust A CO Install & Install & Mi	JF CP ayband Description Acc Cust Abrocase Cart (ACAC) CO Install & Mica - Spec Svcs (SSIM)
		JFC/ Payband	420X 431X 411X	JFC/ Paybend 4AXX 431X C 411X H
	11/7/2000	Function	CONNECT & TEST CONNECT & TEST CONNECT & TEST	Function CONNECT & TEST CONNECT & TEST CONNECT & TEST

Tennessee A.13.899 - 2-Wire Copper Loop - short (Nonrecurring w/ LMU) - Disconnect

Nonrecurring Cost

11/7/2000

	TELRIC \$20 7438	\$20.7438 1.0030 \$20.8063 1.0000 \$20.8063
Additional	Shared Cost	× × ×
	Direct Cost \$20.7438	\$20.7438
	TELRIC \$111.4256	\$111.4256 1.0030 \$111.7614 1.0000 \$111.7614
First	Shared Cost \$0.0000	× × .
	Direct Cost \$111,4256	\$111.4256
	Nonrecurring Cost Development Sheet Col H	Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost

	9	ţ <b>e</b>	Additional \$6.0683 \$0.020 \$0.2338 \$2.2338 \$7.0725 \$0.000 \$	Additional 56 0683 87 2338 87 2375 87 2735 87 2735 87 2735 87 0725 80 0000 20 7438
	D+0=H	Direct Cost	First \$18.2049 \$1.3355 \$0.2338 \$21.5844 \$10.4322 \$41.5507 \$17.6812 111.4256	TELRIC 518 2049 51 7355 80 238 821 5844 810 4352 841 5507 817 6507 111 4256
	¥	Maconnact t	Additional 86 0683 86 0683 86 02338 82 2375 84 6696 87 0725 80 0000 Total	Additional 56 0683 80 2820 80 2338 52 2375 54 6696 50 0000 10.25 54 6696 50 0000 Total
	G=ExF	Discounted Disconnect Cost	First \$10 2049 \$1 7355 \$0 2338 \$21 5044 \$10 4352 \$41 5507 \$17 6812	Discoursed Discoursed Discoursed Discoursed Discoursed Service 5 1 1 2 2 5 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	u.	Disconnect	1.1661 1.1661 1.1681 1.1681 1.1681 1.1681 1.1681	Disconnect Discount Factor 11681 11681 11681 11681 11681 11681
,	E=BxC	Haconnact Cost Additional	\$0.2243 \$0.2243 \$0.2243 \$1.955 \$1.9155 \$4.690 \$6.0547 \$0.0000	Madelienal SS 1950 SS
	2	Disconn Cost	\$15.5650 \$1.4658 \$0.2001 \$18.4782 \$18.935 \$35.5712 \$15.1367	Disconnect Cost Sis 500 815.500 816.405 92.2001 818.4128 82.5012 815.1367
	2	Petall Cost Additional	0000 03 0000 03 0000 03 0000 03	## ## ### ### ########################
è	5		0000 08 0000 08 0000 08 0000 08 0000 08	First Coets \$6 0000 \$5 0000 \$5 0000 \$5 0000 \$5 0000 \$5 0000 \$7
C	,	Olrect Labor Rate	\$31.17 \$33.64 \$38.31 \$38.31 \$42.04 \$45.41	TELRIC Labor Rate \$31.17 \$33.64 \$42.04 \$42.04 \$45.41
		_ §	0.1667 0.0067 0.0058 0.0500 0.0992 0.1333 0.0000	Additional 0.0057 0.0058 0.0058 0.0058 0.0058 0.0058 0.0058 0.0058 0.0058 0.0050 0.0050 0.0000
_	ı	Disconnect Worktimes First A	0 5000 0 0042 0 0056 0 4823 0 2125 0 7533 0 3333 :	Disconnect Worklime Worklime 0.500 0.0442 0.0422 0.0233 0.7333
_		- 홍	00000 0 00000 0 00000 0 00000 0	Additional (10000) (10000 (10000 (10000 (10000 (10000 (10000 (10000 (10000 (10000) (10000 (10000) (10000 (10000) (10000 (10000) (1
<		Installation Worldimes First A	0000 0 00000 0 00000 0 00000 0	First 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000
		- 1	Customer Forward Commer - RSC/LGSC Crout Provisioning Group (CPG) Address & Earthy Memority (AFG) Ac Cust Annocate Care (ACAC) CO Instal & Mica - Spec Sine (SSM) Install & Mica - Spec Sine (SSM) Install & Mica - Spec Sine (SSM)	JFC/Payband Description Customer Povid Of Contact: NSCACSC Circuit Provisioning Group (PCG) Address & Facility Inventory (AFG) Address & Facility Inventory (AFG) Contain & Mace Facility Inventory (AFG) Contain & Mace Facility Circuit & Facility Inventory (AFG) Install & Mace - Spec Syca (SSIM) Install & Mace - Spec Syca (SSIM)
		Payband	484X 484X 484X 481X 411X 411X	JFC/ Parkend 230X 4N4X 4N4X 4N1X 431X 411X 411X
11/7/2000		Function SERVICE INOURS	ENGNEERING ENGNEERING ENGNEERING CONNECT & TEST CONNECT & TEST TRAVEL	Function SERVICE INCURNY ENGINEERING ENGINEERING CONNECT & TEST TRAVEL

Tennessee A.13.998 - 2-Wire Copper Loop - short (Nonrecurring w/o LMU) - Testing

Nonrecurring Cost

11/7/2000

	\$67.7496 \$67.7496 1.0000 \$67.7496 \$67.7496
Additional	Shared Cost \$0.0000 \$0.0000 ×
	Direct Cost \$67.5461 \$67.5461
	\$69.9283 \$69.9283 1.0030 \$70.1390 1.0000
First	Shared
	Direct Cost \$69.9283 \$69.9283
	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost

#### Nonrecurring Cost Development

		_	Additional	\$31 0276	\$2 3823	\$34.1362	67.5461			Additional	\$31 0276	£2 3823	\$34.1362	67 5461	
	H=D+G	Direct Cost		\$31 0276	\$ 7645	\$34 1362	69.9263		TELRIC	First	1	\$4.7645	\$34 1362	69.9283	
		onnect	Additional	0000 0\$	0000 0	20 0000	Total	onnect		Additional	00000\$	\$0 000	0000 05	Total	
	G=ExF	Discounted Disconnect Cost		0000 0\$	0000 O\$	0000 0\$		Discounted Disconnect	Coes	First	ŀ	20,000	\$0,000		
	u.	Disconnect	Factor	1.1681	1.1681	1.1681		Disconnect	Discount	Factor	1.681	1.1681	1.1681		
	υ	•ct	Additional	0000.0\$	0000 O\$	\$0.0000				Additional	\$0.000	00000	\$0.000		
	E=BxC	Disconnect	First	0000 0\$	00000\$	\$0,000		Disconnect	Cost	First	\$0.000	0000 0\$	\$0,000		
A.13.998 - 2-Wire Copper Loop - short (Nonzecurring w/o LMU) - Testing	ų	= -	Additional	\$31.0276	\$2.3823	\$34.1362		=	finatali Coet	Additional	\$31 0276	\$2,3823	\$34.1362		
(Nonrecuring w	D=AxC	Install	First	\$31.0278	C 100	\$34,1362		hata		First	\$31,0276	\$4.764S	\$34,1362		
pper Loop - shar	U	Direct	Kete	\$38.31	37.	¥2.		TELRIC	ğ	Rate	\$38.31	27.0	\$45.41		
13.998 - 2-Wire Co	80	Hecon	Additional	00000	0000	0.0000		mect	300	Additional	0000	9000	0000		
¥			113	00000	00000	00000		Disconnect	Work	First	0000	00000	00000		
	<	ation	Accitions	6080	9000	16/0		ation	The S	Additional	0.8080	900	0.7517		
		Installation Worktimes		0.8089	20.100	0.7517		Installation		2			0.7517		
		JFC/Payband	AANY AAN AAN	CO training Management (ACAC)	hostell & Mare - Creen Stone (SCHA)	(NICO) ROAC SOME COMM			Drongsto	Description	Acc Cust Advocate Critr (ACAC)	CO INSIGN O MICO PIONO - CAT & PAC	LEGI 411X Install & Mice - Spec Sycs (SSIM)		
		JFC/	2	431×	411%	•		Š		a second	2	<u> </u>	¥11 <b>+</b>		
	11/7/2000	Function	15		CONNECT & TEST				Function	COMPLETE & TOTAL	COMMECT & TEST	COMMECT & LEGI	CONNECT & LEST		

Tennessee A.13.999 - 2-Wire Copper Loop - short (Nonrecurring w/o LMU) - Disconnect

Nonrecurring Cost

11/7/2000

	\$15.3127 \$15.3127 \$15.3127 1.0030 \$15.3588 \$15.3588
Additional	Shared Cost \$0.0000 \$0.0000 ×
	Direct Cost \$15.3127 \$15.3127
	\$93.8580 \$93.8580 1.0030 \$94.1408 1.0000
First	Shared
	Cost \$93.8580 \$93.8580
	Nonrecurring Cost Development Sheet Col H  Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost

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	o	<b>16</b>	Additional 50 6372 80 6372 80 2320 80 2338 82 2375 84 8688 87 0725 80 00000 15.3127	Additional 50 6372 80 7520 80 7338 82 2375 82 85 85 87 9725 90 0000 15.3127
	9•G=H	Direct Cost	\$6.6372 \$0.6372 \$0.7355 \$0.238 \$21.5644 \$10.4352 \$41.5607 \$17.6812 \$3.8580	TELRIC First / 80 6372 \$1 7385 \$0 238 \$21 5844 \$21 5844 \$10 4382 \$41 5607 \$17 6812 \$3,850
	<u>u</u>	Meconnect	Additional 80 6372 80 6372 80 6372 80 2338 82 2375 84 8696 87 725 80 0000 Total	##Connect ### Additional ### ### ### ### ### ### ### ### ### #
	G=ExF	Discounted Disconnect	First \$6.0372 \$1.7355 \$0.2336 \$21.5944 \$10.4352 \$41.5507 \$17.6812	Discounted Discounset Cost Addition First 80.8372 80.872 80.17355 80.87 80.17355 80.87 81.13507 81.15507 811.6812 81.07
	u	Disconnect	1.1661 1.1661 1.1661 1.1661 1.1661	Discounset Discount Figure 1.1681 1.1681 1.1681 1.1681 1.1681
	E=BxC	Disconnect Cost	Additional 80 5455 80 2243 80 2240 81 1695 84 1690 86 0547 \$0 0000	Disconnect Cost Additional 455 Additional 628 R0 2243 001 80 2001 782 81 9155 51 9155 51 9159 51 9159 51 9159 51 9159 51 9159 51 9159
5	Ü		\$1.4656 \$1.4656 \$1.4656 \$1.64782 \$9.933 \$35.5712 \$15.1367	Pleac C C 50 5455 \$1 4658 \$1 4658 \$1 4658 \$1 5001 \$15.1367
We will the connection of the	D=AxC	install Cost First Additional	0000 05 0000 05 0000 05 0000 05 0000 05	Cost Additional 50 00000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 00
	٥		1	First C C C C C C C C C C C C C C C C C C C
The state of the s	U	Direct Labor Rate	201.17 201.17 201.17 201.17 201.17 201.17 201.17 201.17	TELRIC Labor Rate 831-17 833-14 834-31 842-04 842-04 845-41
	<b>6</b> 0	Disconnect Worktimes Additional	]	Mortitimes  Mortitimes  Additional  175 00175  00175  175 00500  175 00500  133 0 1333  10000
		ag ¥	1	Pire Woo
	<	Installation Worktimes Additional	0000 0 0000 0 0000 0 0000 0	Werktimes Additional 000 000 0000 0000 0000 0000 0000 000
		Inst Wo First	0000 0 0000 0 0000 0 0000 0	First Wor 0 0000 0 0000 0 0000 0 0000 0 0000 0 0000 0 0000
		!	Customer Pour Of Contect - ICSCALCSC Creat Provisioning Group (CPG) Address & Fadiry Inventory (AFG) Acc Cust Advocate Crit (ACAC) CO Install & Mice - Spec Svot (SSIM) Install & Mice - Spec Svot (SSIM)	JF CPaybard  Description  Custome Poor Of Contact - ICSC/LCSC  Croul Provisioning Group (CPO)  Address & Facility Inventory (AFIG)  Act Cust Affocuse Or (ACAC)  Of Prasad & Mitor Field - Cit & Fac  Instal & Mitor Spec Svcs (SSM)  Instal & Mitor - Spec Svcs (SSM)
		•	444X 444X 444X 444X 444X 444X 444X 444	JFCJ 230X 4N4X 4N1X 4AXX 431X 411X 411X
	11/7/2000	Function	SENVCE ODDER ENGNEERING ENGNEERING CONNECT & TEST CONNECT & TEST TAAVEL	Function SERVICE ORDER EXCANEERNG ENGINEERNG CONNECT & TEST CONNECT & TEST TRAVEL

Tennessee A.13.1098 - 2-Wire Copper Loop - long (Nonrecurring w/ LMU) - Testing

Nonrecurring Cost

11/7/2000

	\$67.5461 \$67.5461 \$67.5461 \$67.7496 \$67.7496
Additional	Shared Cost \$0.0000 \$0.0000
	Direct Cost \$67.5461
	\$69.9283 \$69.9283 \$69.9283 1.0030 \$70.1390 1.0000
First	Shared Cost \$0.0000 \$0.0000 ×
	Direct Cost \$69.9283 \$69.9283
	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost

			۱	9	3	~	Ξ				۱	_	~	=
	9	Cost	Additional	\$31 027	\$2 382	\$34,1362	67.54 1		Ų	Additional	\$31 027	\$2 382	\$34.1362	97.54
	H=D+G	Direct Cost	First	\$31 0276	£ 7645	\$34.1362	69.9293		TELRIC	Ę	\$31.0276	\$4.7645	\$34 1362	69.9283
	¥.	Disconnect at	Additional	00000	0000	\$0,000	Total	Neconnect	*	Additional	00000\$	20,000	0000 os	Total
	G=ExF	Discounted Disconnect Cost	E E	0000	00000\$	\$0,000		Discounted Disconnect	Cost	Ē	0000 0\$	00000\$	\$0,000	
	ш	Disconnect	Factor	90	1.1881	1.1681		Disconnect	Discount	Factor	1.1681	1.1681	1,1681	
	O	<b>Q</b>	Additional	0000	0000	\$0.0000		¥		Additional	0000	0000	\$0.000	
	E=BxC	Discon	1	000000	00000	\$0,000		Disconnect	Cost	i i	0000	0000	0000 0\$	
" LMU) - Testing	ű		**************************************	0/20104	25.3823	\$34,1362		=		Additional	\$31.0276	\$2 3823	\$34,1362	
j (Monrecuring w	D≃AxC	Install	£34 0278	24.25.45	200	\$34.1362		Install			\$31.0276	7845	\$34,1362	
A.13.1096 • 2-Wife Capper Loop - long (Nonrecurring W/ LMU) - Testing	ပ	Ofrect Labor	638 24		5.75	40		TELRIC	Labor	Maria	236.5	37.	<b>1</b> 25.21	
3.1095 - 2-Wire C		nect Tes Additional	0000	0000	900	0.000		<b>M</b> ect	Addis	- Constitution	0.000	0000	0,000	
<b>\</b>	6	Disconnect Worktimes	00000	0000	3 8 8	0000		Disconnect	Floor		0000	0.000	0000	
		tion nes Additional	0.8099	0.0567	2547			5	Additional	9000	0.0038	0000	16/0	
	∢	Installation Worldimes	0 8099	0 1133	7813			Installation	First	1	0.0088	200	0.731	
		JFC/Payband Description	X Cust A	CO Install & Mica Field - Ckt & Fac	Install & Mice - Spec Suce (SSIM)	(minch space and		9,00,00		2	CO Install & Man Cinta - Cit & Co.	Install & the Care Company	(MICC) TAC CARD . ATHE D MICH	
		JFC/ Payband	4AXX A	431X	411X			2	Pavband	AAAA	411×	× 11.	•	
	11/7/2000	Function	CONNECT & TEST	CONNECT & TEST	CONNECT & TEST				Function	COMMECT & TEST		COMMECT & TEST		

000060

Tennessee A.13.1099 - 2-Wire Copper Loop - long (Nonrecurring w/ LMU) - Disconnect

Nonrecurring Cost

11/7/2000

	\$20.7438 \$20.7438 \$20.7438 1.0030 \$20.8063 1.0000 \$20.8063
Additional	Shared Cost \$0.0000 \$0.0000  ***  ***  ***  ***  **
	Direct Cost \$20.7438 \$20.7438
	\$111.4256 \$111.4256 \$111.4256 1.0030 \$111.7614 1.0000
First	\$0.0000 \$0.0000 \$0.0000 \$0.0000
	Direct Cost \$111,4256 \$111,4256
	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost

000061

		ï	Additional	\$6 0683	\$0 2620	\$0 2338	\$2 2375	\$4.869e	\$7 0725	\$0.0000	20.7438			Addition	CR ORRI	20 2620	£0 2338	62 2236	64 6600	2000	0000 0\$	20.7438
	9+Q±H	Direct Cost	First	\$18.2049	\$1 7355	\$0.2338	\$21.5844	\$10 4352	\$41.5507	\$17.6812	111,4256			First	ļ	\$1 7355	EU 2738	£21 5844	£10 43£3	644 6503	\$17.6812	111.4258
	ų,	econnect	Additional	\$6.0683	\$0.2620	\$0 2336	\$2.2375	\$4.869e	\$7 0725	0000 O\$	Total		SCONNECT	Antilitional	\$6.0683	\$0.2620	\$0 2338	\$2 2375	200	67 0736	20,000	Total
	G=ExF	Discounted Disconnect	2	\$18.2049	\$1.7355	\$0 2338	\$21.5844	\$10 4352	\$41.5507	\$17 6812		Olevenin Paris			\$18 2049	\$1,7355	\$0,2338	\$21.5844	\$10.4362	702	\$17.6812	
	u.	Disconnect	ractor	1.1681	1.1681	1881	1681	1.1681	1 1681	1.1681		Oleconomic	Discount	Factor	1 1681	1 1681	1.1681	1.1681	11681	5	1.1681	
	E=BxC	nnect et	Additional	25.056	\$0.2243	\$0,200	\$1.9155	Z .	\$6.0547	\$0.0000		name:		Additional	55 1950	\$0.2243	\$0.2001	\$1.9155	1690	\$6.0547	0000 0\$	
	Ē	Disconnect		\$15.5850	\$1.4658	10 2001	518.4782	\$6.9335	\$35.5712	\$15.1367		Disconnect	Contract	First	\$15.5850	\$1.4858	\$0,200	\$18.4782	\$8 9335	\$35.5712	\$15 1367	
A.13.1099 - 2-Wire Copper Loop - long (Nonrecurring w/ LMU) - Disconnect	D=AxC	Cost	S COOL	000000	000000	20.000	00000	00000	20000	0000.0\$		7	*	Additional	\$0.000	\$0.000	0000	20.000	80.0000	0000 0\$	0000 0\$	
onrecurring w/ Li	å	i S	0000	00000	0000	00000	00000	00000	0000	00000		Install	Contr	First	0000 0\$	20 0000	0000	0000 O\$	\$0,000	00000\$	0000 O\$	
er Loop - long (N	ပ	Direct Labor	631 13	100	600	7 5 5 6	10.00	200		70%		TELRIC	Pode	Rate	\$31.17	\$33.64	£34.33	\$38.31	<b>2</b> 50	<b>25.41</b>	\$45.41	
099 - 2-Wire Copp		nnect ikmes Additional	0 1667	0.1007	9000	9000	0.000	0.111	0000	9000		mect	-	Additional	0.1667	0.0067	85000	00200	0.0992	0.1333	0.0000	
A13.1	-	Disconnect Worktimes First	0.6000	0.0447	9000	0.000	90400	0.2833	2000	0.3333		Disconnect	Worktimes	First	0005	0.0442	BCCC C	0.4823	0.2125	0.7833	0.3333	
	<	ation imes Additional	0000	0000	800		9000	0000	9000	990		Mon	*	Additional	0000	00000	0000	0000	0000	00000	0.0000	
		Installation Worktimes First Ac	0000	00000			0000		900	3		Installation	Worktime	Fr	0000	0000	3000	0000	00000	0000	0.0000	
		JFC/Payband Description	Customer Point Of Contard - ICSCA CSC	Circuit Provisioning Group (CPG)	Address & Facility Inventory (AFIG)	Acc Cust Advocate Cote (ACAC)	CO Install & Mice Field . Cut & Far-	Install & Mice - Spec Syca (SSIM)	Install & Mice - Coar Sura (SSM4)	(misc) and and a miss			JFC/Payband	Description	Customer Point Of Contact - ICSC/LCSC	Circuit Provincing Group (CPG)	Accress or acately inventory (AFIG)	Acc Cust Advocate Cnt (ACAC)	CO Install & Mice Field - Citi & Fac	Install & Mice - Spec Svcs (SSRA)	metall & Mice - Spac Svcs (SSIM)	
		JFC/ Payband	230X	XXX	4M1X	AAXX	431X	411X	411X	:			Š	Perdand	730X	<b>***</b>		Š	¥21.	411X	¥	
	11/7/2000	Function	SERVICE INQUIRY	ENGINEERING	ENGINEERING	CONNECT & TEST	CONNECT & TEST	CONNECT & TEST	TRAVEL					Function	SERVICE BYCORY	CHICAGORICA	COMMISSION OF THE PARTY	COMMECT & TEST	CONNECT & LEST	CONNECT & rest	TRAVEL	

Tennessee A.13.1198 - 2-Wire Copper Loop - long (Nonrecurring w/o LMU) - Testing

Nonrecurring Cost

	\$67.5461 \$67.5461 1.0030 \$67.7496 1.0000
Additional	Shared Cost \$0.0000 \$0.0000 ×
	Direct Cost \$67.5461 \$67.5461
	\$69.9283 \$69.9283 \$69.9283 1.0030 \$70.1390 1.0000
First	Shared
	Direct Cost \$69.9283
	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor . Nonrecurring Economic Cost

ALLS, ITRE - A TRIE COPPET LOOP - KING (Nonrecurring w/o LMU) - Feeting	A B C D=AAC F G=EAF H=D+G	Installation Disconnect Direct Install Disconn Worldman Worldman Labor Cost Cost Cost Cost	0         0         0         0         0         0         0         0         0         4         0         0         4         0         4	Mortitines Worktines Labor Coat Discounted D	2276 \$31 0276 \$0 0000 \$0 0000 1 1681 145 \$2.3873 \$0 0000 \$0 0000 1 1681 362 \$34.1362 \$0 0000 \$0 0000 1 1681
V- 94117:1174	60	Disconne Worltilma Final	0 0000 7 0 0000 7 0.0000	Disconnect Worltimes First Addit	00000
	<	Installation Worldines First Addition		allation ritimes Addit	
		JFC/Payband Description	Acc Cust Advocate Chir (ACAC) CO Install & Mice - Spec Svot (SSIM) Install & Mice - Spec Svot (SSIM)	JFC/Payband Description	ACC LUSS AGNOCING CATE (ACAC) CO Install & Mice Field - CRt & Fac Install & Mice - Spec Svcs (SSIM)
		JFC/ Payband	4400 431X 411X	Payband	
	11/7/2000	Function	CONNECT & TEST CONNECT & TEST CONNECT & TEST	Function COMMENT A TECT	CONNECT & TEST

Tennessee A.13.1199 - 2-Wire Copper Loop - long (Nonrecurring w/o LMU) - Disconnect

11/7/2000

Nonrecurring Cost

	JEI BIC	\$15.3127	\$15.3127	1.0030	1.0000	\$15.3588
Additional	Shared	\$0.0000	\$0.0000		^	
		\$15.3127				
	TELRIC	\$93.8580	\$93.8580	\$94.1408	1.0000	\$94.1408
First	Sha	\$0.000			*	
	Direct Cost	11	\$93.8580			
	Nonconstitution of the Contraction of the Contracti	Total Cost	Gross Receipts Tax Factor	Cost (including Gross Receipts Tax)	Nonrecularing Economic Cost	

		*	\$0 6372	\$0.2338	\$2 2375 \$4 8698	\$7 0725 \$0 0000	15.3127		Additional	\$0 6372	\$0 2620	\$0 2338	\$2 2375 \$4 8608	\$7.0725	15.3127
	9•d=H	Direct Co		\$0 2338	\$10.4352	\$17.6812	93.8580	TELRIC	1	\$0.6372	\$1.7355	\$0 2338	\$10 4352	541.5507	\$17.6812 93.8580
	14	Connect	\$0.6372	\$0 2336	\$4.8698	\$7 0725 \$0 0000	Total	connect	Additional	\$0.8372	20.2620	BO 2338	24.8696	\$7 0725	\$0.000 Total
	G=ExF	Discounted Disconnect	\$06372	\$0.2338	\$10 4352	\$41 5507 \$17.6812		Discounted Disconnect Cost	Firet	\$0.6372	\$1.7355	621 5844	\$10.4352	\$41.5507	\$17.6612
	u.	Disconnect Discount Factor	1.1681	1.1681	198	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		Discount	Factor	1981	1991	1881	1681	1881	1,1681
	E=8xC	nnect et Additional	\$0.5455	\$0.2001	7.1690	\$0.000		nect H	Additional	0000	277.04	\$19155	1680	\$6.0547	0000 O\$
_	E	Disconnect Cost	\$0.5455	\$0.2001	\$8.9335	\$15.1367		Disconnect	100	64 4868	2000	\$18.4762	\$8.9335	\$35.5712	\$15.1367
A 13.1199 • Z-THE CORPOR LOOP • IONG (NON'ECUTING W/o LMU) • Disconnect	D=AxC	Install Cost Additional	\$0,000 \$0,000	0000 0	00000\$	0000 O\$			SOUND OF	5	00000	\$0,000	0000 O\$	0000	00000
tourecurring w/o	ä	Ē Q	0000 0\$	0000 OS	00000	00000		Fine	9	00000	00000	\$0.000	0000 0\$	0000 05	0000 01
ner Loop - long (R	ပ	Direct Labor Rate	\$31.17 \$33.64	<b>536.31</b>	<b>X</b> 2.04	12.54		TELRIC	21 12	233.64	\$34.31	\$38.31	<b>21</b> 2 04	20.	Š
don saw-7-sal	80	Disconnect Worktimes Additional	0.0175	0.050	0.0992	0 0000		Disconnect Worktimes Additional	0 0 175	0.0067	0.0058	00000	0.0862	0.1333	9000
2		Disce Worl	0.0175	0.0058	0.2125	0 3333		Disconnec Worktime	0.0175	0.0442	9500 0	0.4823	0.2125	0.7833	5555
	<	Installation Worldimes Additional	0.000	00000	00000	0000		Installation Worktimes Additional	00000	0000	00000	00000	00000	0000	
		Insta Worl	0.000	0000	00000	00000		Installation Worktimes	0000	00000	00000	0.000	0000		
		JFC/Payband Description	Customer Point Of Contact - ICSCA.CSC Circuit Provisioning Group (CPG)	Acc Cust Advacate Crit (ACAC)	CO Install & Mice Field - Ckt & Fac Install & Mice - Spec Syce (SSIM)	Install & Mice - Spec Svcs (SSIM)		JF C/Payband Description	Customer Point Of Contact - ICSCA.CSC	Circuit Provisioning Group (CPG)	Address & Facility Inventory (AFIG)	Acc Cust Advocate Crit (ACAC)	CO Install & Mice Fred - Cit & Fac	Install & Mine - Sper Sure (SSIM)	
		Perform	44 X X	44XX	431X	411X		JFC/ Payband	230X	¥¥¥	4M1X	4AXX	¥21.¥	411X	
	11/7/2000	Function	ENGINEERING ENGINEERING	CONNECT & TEST	CONNECT & TEST	TRAVEL		Function	SERVICE ORDER	ENGINEERING	ENGINEERING	CONNECT & TEST	CONNECT & TEST	TRAVEL	

Tennessee
A.14.8 - 4-Wire Copper Loop - short (Nonrecurring w/ LMU)

Nonrecurring Cost

11/7/2000

		\$87.5985			\$87.8624	1.0000	\$87.8624
Additional	Shared Cost	\$0.000	\$0.000			*	
	Direct Cost	\$87.5985	\$87.5985				
	TELRIC	\$199.7061	\$199.7061	1.0030	\$200.3078	1.0000	\$200.3078
First	Shared Cost	\$0.000	\$0.000	×"		×"	
	Direct Cost	\$199.7061	\$199.7061				
		Nonrecurring Cost Development Sheet Col H	Total Cost	Gross Receipts Tax Factor	Cost (including Gross Receipts Tax)	Common Cost Factor	Nonrecurring Economic Cost

			Additional	\$11 4706	\$5 1950	\$16 8476	\$3 3782	\$1.5138	\$1 3724	\$5 4719	\$0 0000 \$	\$3 5734	838 7756	20 0000	87.5985				Additional	11 4706	\$5 1950	116 8476	\$3 3782	\$1 5138	\$1 3724	\$5 4719	\$0 0000	\$3 5734	136 7756	00000	87.5985
	9•0=H	Direct Cost		\$27.2054	\$23 3775	\$16.8476	\$13.5127	\$2 7753	\$1.3724	\$22.9477	\$1 0920	\$7 1468	1262.395	115, 1367	199.7061			TELRIC	1	27 2054	\$23 3775	16.8476	13.5127	\$2 7753	\$1 3724	\$22.9477	\$1 0920	\$7 1468	\$68 2921	15 1367	100.7061
		onnect		0000 0\$	0000	\$0.000 \$	\$0.0000	0000 0\$	0000 0\$	00000			000000	0000 0\$	70 26	,	punect				00000								900000		
	G=ExF	unted Die Coet	,	0000	0000	0000 O\$	0000 0\$	0000 0\$	0000 G	0000	00000	0000 04	2000	0000 O\$			Discounted Disconnect	5	1	0000	00000	00000	0000	00000	0000 0	0000 0	0000 03	00000	0000 03	10000	
	u	Disconnect	Factor	1820	1 1820	1820	1.1920	1 1920	1 1920	1.1920	0761	286	2	1.1920		Discount	Discount		1 1000	0761	281	0761	078	DZ61	0781	1920	1.1920	1820	1.1920	0761	
	Ų	# _	Additional	00000	00000	0000 05	0000 0\$	00000	00000	00000	00000	00000	2000	20.0000		1	ı	Additional	00000	2000			00000	00000	00000	00000	00000	0000		2000	
	E=8xC	Disconnect	First	00000	00000	90000	00000	00000	000000	0000	0000		0000	9000		Disconnect	Co	Fire	0000	5	20 000	9000		900	0000	00000	00000	00000			
/ FINED)	υ		ADDITIONAL ATOM	904 1060	0.00	9/9/014	\$5.3782	901016	65.4710		72.4.5	\$38 7756	0000	an non				Additional	\$11.4706	25 1950	\$16.6476	\$3.378.2	£1 £138	K1 1724	CK 4740	600000	63 6734	2317.00	00000		
(Nonrecurring w	D=AxC	Install Cost	227 2054	\$27.1776	C16 8478	£12 £177	13.5.5.4	£1 1724	\$20 0477	\$1.0920	\$7 1468	\$68,2921	C15 1767	2		fretell	200	First	\$27.2054	\$23.3775	\$16.8476	\$13 5127	\$2 7753	\$13724	£22 6477	1000	\$7 145a	CCB 2021	\$15 1367		
A.14.8 - 4-Wire Copper Loop - short (Nonrecurring w/ LMU)	<b>o</b> .	Direct	\$51.17	23.17	3	2	38	25	£38.31	532 76	242.04	\$45.41	77.575			TELRIC	Labo	Rate	11153	231.17	\$40.54	20.02	\$33.64	\$34.31	\$3631	\$12.78	\$42.04	757	75.41		
14.8 - 4-Wire Co		ct Medistronal	00000	00000	00000	0000	00000	0 0000	00000	00000	00000	0.000	00000			Ħ		Additional	0000	0000	00000	0000	0.000	00000	00000	0000	00000	0000	0000		
<	60	Disconnect Worktimes First Ad	00000	00000	00000	00000	00000	0000	0000	00000	00000	00000	0000			Disconnect	Worktim		00000	0000	00000	0000	0000	00000	00000	00000	0.000	00000	00000		
		on Meditional	0 2242	0.1667	0.4156	0 0633	0.0450	0.0400	0.1428	0000	0.0850	0.8539	0000					Additional	0.2242	0 1667	0.4156	0 0833	0.0450	0 0400	0.1428	00000	0.0050	0.8539	0.000		
	<	Installation Worktimes First Ad	0.5317	0.7500	0.4156	0.3333	0.0825	0 0400	0.5990	0.0333	0.1700	1.5039	0.3333			Installation	Worktime	1	0.5317	0.7500	0.4156	0.3333	0.0825	00400	0 2880	0.0333	0.1700	1.5039	0 3333		
		JFC/Payband Description	Systems Designer w/Sales Com	Customer Point Of Contact - ICSC/LCSC	Job Grade 57	Job Grade 57	Circuit Provisioning Group (CPG)	Address & Facility Inventory (AFIG)	Acc Cust Advocate Cnir (ACAC)	Work Management Center (WMC)	CO Install & Mice Field - Ckt & Fac	install & Mice - Spec Svcs (SSIM)	Install 6 Milce - Spec Svcs (SSMI)				JFC/Payband	Description	Systems Designer w/Sales Com	Customer Point Of Contact - ICSC/LCSC	Job Grade 57	Job Grade 57	Circuit Provisioning Group (CPG)	Address & Facility Inventory (AFIG)	Acc Cust Advocate Critr (ACAC)	Work Management Center (WMC)	CO Install & Mice Field - Cit & Fac	Install & Mice - Spec Svcs (SSIM)	Install & Mice - Spec Svcs (SSIM)		
		JFC/ Payband	SDWC	230X	JG57	<b>JG57</b>	4N4×	4M1X	<b>4</b> 800	4WXX	431X	¥11X	¥1;¥			į		Duesta	SOWC	X0X7	1637	7657		-	•		_	ž	41 X		
	11/7/2000	Function	SERVICE INQUIRY	SERVICE INQUIRY	ENGINEERING	ENGINEERING	ENGINEERING	ENGINEERING	CONNECT & TEST	CONNECT & TEST	CONNECT & TEST	COMMECT & TEST	IKAVEL				Considera	CHARGO	SERVICE INCOMY	SERVICE INCOMY	ENGINEERING	ENGINEERING	EMGINEERING	ENGINEERING	CONNECT & TEST	CONNECT & TEST	CONNECT & TEST	CONNECT & TEST	TRAVEL		

Nonrecurring Cost Development

Tennessee A.14.9 - 4-Wire Copper Loop - short (Nonrecurring w/o LMU)

Nonrecurring Cost

11/7/2000

	TELRIC	\$53.2092	\$53.2092	1.0030	\$53.3695	1.0000	\$53.3695
Additional	Shared Cost	\$0.0000	\$0.000	× ·	•	×'	
	Direct Cost	\$53.2092	\$53.2092				
	TELRIC	\$122.0805	\$122.0805	1.0030	\$122.4484	1.0000	\$122.4484
First	Shared Cost	\$0.000	\$0.000			^	-
	Direct Cost	\$122.0805	\$122.0805				
		Nonrecurring Cost Development Sheet Col H	Total Cost	Gross Receipts Tax Factor	Cost (including Gross Receipts Tax)	Common Cost Factor	Nonrecurring Economic Cost

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					•	7.14.V - 4-Wire Co	A.14.8 - 4-Wire Copper Loop - short (	(Nonrecurring w/c								
11/7/2000			<		€		v	D=AxC	0	E=BxC		u.	G=ExF	ų,	9+Q=H	
:	J.	•	Installation Worktimes	ation	Disconnec	Ų ¥	Direct Labor	Install		Disconnect	ŭ	Disconnect	Discounted Disconnect	Haconnect	2000	•
Function	Payband	- 1	Ē	Additional	First	Additional	Rate	First	Additional	First	Additional	Factor	1	Additional	First	Additional
SERVICE URDER	X067	_	0.0175	0.0175	0000	00000	\$31.17	\$0.5455	\$0.5455	00000\$	20,000	0.01	00000	00000	CO 5455	E) CAEC
ENGINEERING	1657		0.0416	0.0416	00000	00000	\$40.5¢	\$1.6848	\$1.6848	00000	00000	1 1020	9000	0000	2000	200
ENGINEERING	4FXX	•	0.0333	0.0083	00000	0000	\$32.62	\$1,0873	\$0.2718	00000	20000	4 1020		0000	2.00.0	0.0016
ENGINEERING	XXX	_	0.0625	0.0450	00000	0000	\$33.64	\$2 7753	\$15138	00000	00000	000	00000	00000	81.06/3	87.72
ENGINEERING	##1X	-	0.0400	00400	0.000	00000	234.31	\$1.3724	\$13724	9000		0.00	00000	00000	557733	BC16.13
CONNECT & TEST	<b>\$</b>	-	0.5990	0.1428	0.000	0000	\$38.31	\$22 9477	\$5.47.19	9000	9000	1 1020	00000	00000	27.514	\$13/24
CONNECT & TEST	4WX	K Work Management Center (WMC)	0.0333	00000	00000	0000	\$32.76	\$1.0920	20 0000	9000	300	000.	00000	00000	1/16/774	50.47.19
CONNECT & TEST	431X	_	0.1700	0.0650	0.0000	00000	22.04	\$7.146B	\$3.5734	5005	9000	2000	00000	00000	026018	0000
CONNECT & TEST	411X	_	1,5039	0.8539	00000	00000	25	EGA 2021	628 775.6		0000	0267	0000	0000	\$7.1468	\$3.5734
TRAVEL	411X	_	0.3333	0000	0000	0000	7	646 1961	9007.00	00000	0000	0261	0000 03	20.0000	\$68.2921	\$38 7756
						3	r i	/0CT-CT-	2000	00000	00000	1 1920	00000	0000 0\$	\$15.1367	0000 os
														Total	122.0805	53.2082
			Installation	tion	Disconnect	Į.	TELRIC	Stated		Oleconomy	1		i			
	JFC.	JFC.Payband	Worktimes	1	Worktime	3	Labor	3		Conf	5	Disconnect	Discounted Disconnect	econnect		
Function	Payband	- ;	First	Additional	First	Additional	Rate	First	Additional		Additional	Factor	First	Additional	ELMIC.	
SERVICE ORDER	230X	0	0.0175	0.0175	00000	00000	\$31.17	\$0.5455	\$0.5455	20000	00000\$	1 1920	00000	0000	CO CASE	ADD CASE
ENGINEERING	1657		0.0416	0.0416	0000	0000	\$40.54	\$1 6648	\$1 6848	0000 0\$	\$0,000	1 1920	50.000	0000	6.6849	20 0400
ENGINEERING	#- XX		0 0333	0 0063	0000	0000	\$32.62	\$1.0873	\$0.2718	20 0000	\$0,000	1 1920	00000	00000	\$10873	20.00
ENGINEERING	X		0.0825	00430	00000	0000	23364	\$2.7753	\$1,5138	0000 0\$	0000 0\$	1 1920	00000\$	80 0000	\$2 7753	20.5
COCKECTIVE TOTAL	Y I W		0000	800	0000	0000	<b>134.3</b>	\$1.3724	\$1.3724	0000.0\$	\$0,000	1.1920	20 0000	20 000	\$13724	\$1.3724
CONNECT & TEST	<b>4</b>		0865	0.1428	00000	0000	\$38.31	\$22.9477	\$5.4719	0000 O\$	0000 0\$	1 1920	0000 05	00000	\$22.9477	65.4710
COMMECT & TEST	¥ 4		0 0333	0000	00000	0000	\$32.76	\$1.0920	0000.0\$	0000 O\$	0000 o <b>\$</b>	1.1920	0000 0\$	0000.0\$	\$1 0920	00000
COMMECT & TEST	2 :	-	0.1700	00000	00000	0000	<b>2</b> 5.0	\$7.1468	\$3.5734	20.000	0000 0\$	1.1920	\$0,000	\$0.0000	\$7 1468	\$3 5734
TBAGE	<u> </u>		1 203	0.6539	00000	0000	2 2 2	\$66.2921	\$38.7756	0000 O\$	\$0.000	1 1920	0000 0\$	\$0,000	\$68 2921	\$38 7756
INVE	š	Install & MICe - Spec Svcs (SSIM)	0.333	00000	00000	00000	<b>25</b>	\$15 1367	\$0.000	\$0.000	00000	1.1920	20.000	\$0,000	\$15.1367	00000
														100	122 0804	63 7007

Tennessee A.14.10 - 4-Wire Copper Loop - Iong (Nonrecurring w/ LMU)

	Additional	Shared         TELRIC           \$0.0000         \$87.5985           \$0.0000         \$87.5985           X         1.0030           \$87.8624           X         1.0000           \$87.8624           \$87.8624
Nonrecurring Cost		Direct Cost \$87.5985 \$87.5985
Nonrecur		\$199.7061 \$199.7061 \$199.7061 \$200.3078 \$200.3078
	First	Shared Cost \$0.0000
		Direct Cost \$199.7061 \$199.7061
11/7/2000		Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost

					<	.14.10 - 4-Wins Co	opper Loop - long	A.14.10 - 4-Wire Copper Loop - long (Norrecurring w/ LMU)	" LMU)							
11/7/2000			<		•		v	. D=AxC	ű	E=BxC	Ų	u.	G=ExF	¥.	H=D+G	
	<u> </u>	JF.C.Payband	Installation	atlon	Disconnect	¥ s	Direct	Install	<b>=</b>	Disconnect	¥.	Disconnect Discount	Discounted Disconnect Cost	Disconnect	Direct Cost	¥
Function	Payband	Description	Fra	Additional	ļ	Additional	Rate	First	Additional	Frat	Additional	Factor	F	Additional	First	Additional
SERVICE INQUIRY	SDWC	Systems Designer w/Sales Com	0.5317	0.2242	00000	00000	\$51.17	\$27 2054	\$11.4706	0000 0\$	00000\$	1.1920	00000\$	00000\$	\$27.2054	\$114706
SERVICE NOUIRY	230X	Customer Point Of Contact - ICSC/LCSC	0.7500	0.1667	0000	00000	\$31.17	\$23.3775	\$5.1850	\$0,000	\$0.000	1.1920	20 0000	00000\$	\$23 3775	\$5 1950
ENGINEERING	JG57	Job Grade 57	0.4156	0.4156	00000	0000	<b>3</b> 5 0 <b>3</b> 5	\$16.8476	\$16.8476	20.0000	0000 O\$	1 1920	20 0000	0000 0\$	\$16.8476	\$16 8476
ENGINEERING	1657	Job Grada 57	0.3333	0.0833	00000	00000	70.5	\$13.5127	\$3.3762	\$0.000	\$0,000	1.1920	\$0,000	\$0.000	\$13.5127	\$3 3782
ENGINEERING	4N4X	Circuit Provisioning Group (CPG)	0.0625	0.0450	00000	00000	<b>\$</b> 33.64	\$2,7753	\$1.5138	\$0,000	0000 O\$	1.1920	0000 0\$	00000\$	\$2 7753	\$15138
ENGINEERING	4M1X	Address & Facility Inventory (AFIG)	0.0400	0.0400	00000	00000	\$34.31	\$1.3724	\$1.3724	0000 O\$	\$0.000	1.1920	\$0.000	\$0,000	\$1 3724	\$1.3724
CONNECT & TEST	4AXX	Acc Cust Advocate Cnir (ACAC)	0.5990	0.1428	0.000	0.000	\$38.31	\$22.9477	\$5.4719	0000 0\$	0000 0\$	1.1920	0000 0\$	0000.0\$	\$22 9477	\$5 47 19
CONNECT & TEST	4WXX	Work Management Center (WMC)	0.033	0000	00000	00000	\$32.78	\$1 0920	0000 0\$	\$0.000	\$0.000	1 1920	0000 0\$	0000 0\$	\$1 0920	0000 0\$
CONNECT & TEST	431X	CO Install & Mice Field - Ckt & Fac	0.1700	0.0850	00000	0.000	<b>\$4</b> 2.04	87.1468	\$3.5734	\$0.000	20 0000	1 1920	0000 0\$	20 0000	\$7 1468	\$3 5734
CONNECT & TEST	411X	Install & Mica - Spec Svcs (SSIM)	1.5039	0.8539	0000	00000	<b>K</b> 5.41	\$68.2921	\$38.7756	0000 0\$	00000\$	1.1920	80.0000	0000 o\$	\$68 2921	\$38 7756
TRAVEL	411X	Install & Mice - Spec Svcs (SSIM)	0.3333	00000	00000	0.000	\$45.41	\$15,1367	\$0,000	\$0.0000	\$0.000	1.1920	0000 0\$	20 0000	\$15,1367	\$0.0000
														Total	199.7061	87.5985
			hetallation	ttlon	Disconnect	T	TELRIC	Install	_	Disconnect	<b>1</b>	Disconnect	Discounted Disconnect	Disconnect		
	7	JFC:Payband	Worktimes		Worktimes	•	Labor	200		Cost		Discount	3	-	TELRIC	
Function	Payband	Description	First	Additional	First	Additional	Rate	First	Additional	First	Additional	Factor	Ē	Additional	First	Additional
SERVICE INQUIRY	SDWC	Systems Designer w/Sales Com	0.5317	0.2242	00000	0.000	\$51.17	\$27 2054	\$11.4706	0000 0\$	0000 0\$	1.1920	0000 0\$	0000:05	\$27 2054	\$11 4706
SERVICE INQUIRY	X0CZ	Customer Point Of Contact - ICSC/LCSC	0.7500	0.1667	0,000	0.000	\$31.17	\$23.3775	\$5 1950	0000 0\$	20 0000	1.1920	0000 0\$	20,000	\$23 3775	\$5 1950
ENGINEERING	1657	Job Grade 57	0.4156	0.4156	0000	0000	<b>2</b> 0.5	\$16.8476	\$16.8476	00000\$	00000	1 1920	00000\$	\$0,000	\$16 8476	\$16 8476
ENGINEERING	1057	Job Grade 57	0.3333	0.0833	0.000	0000	3	\$13.5127	\$3.3782	0000 O <b>\$</b>	0000 O\$	1 1920	0000 0\$	0000 0	\$13 5127	\$3 3782
ENGINEERING	*NAX	Circuit Provisioning Group (CPG)	0.0825	0.0450	0000	0000	<b>2</b> 33.64	\$2 7753	\$1.5138	0000 0\$	\$0,000	1.1920	0000 03	\$0,000	\$2 7753	\$15138
ENGINEERING	4M1X	Address & Facility Inventory (AFIG)	0 0400	00400	0000	0000	<b>334 31</b>	\$1.3724	\$1.3724	00000	0000 0\$	1.1920	0000 0\$	0000 os	\$1 3724	\$1 3724
CONNECT & TEST	<b>4</b> AXX	Acc Cust Advocate Cntr (ACAC)	0.5990	0.1428	0000	0000	\$38.31	\$22 9477	\$5.4719	00000\$	\$0.000	1.1920	0000 0\$	0000 O\$	\$22.9477	\$5 47 19
CONNECT & TEST	4WXX	Work Management Center (WMC)	0.0333	00000	0000	0000	\$32.76	\$1,0920	00000	0000 0\$	\$0.000	1.1920	0000 os	20 0000	\$1 0920	0000 0\$
CONNECT & TEST	431X	CO Install & Mice Field - Ckt & Fec	0.1700	0 0050	0000	00000	\$42.04	\$7.1468	\$3 573M	0000 o <b>\$</b>	\$0,000	1.1920	0000 0\$	0000 0\$	\$7 1468	\$3 5734
CONNECT & TEST	411X	Install & Mice - Spec Svcs (SSIM)	1.5039	0.8539	0000	0.000	<b>45</b> 4	\$66.2921	\$38.7756	\$0.000	0000.0\$	1.1920	0000.0\$	0000 0\$	\$66 2921	\$38 7756
TRAVEL	411X	Install & Mice - Spec Svcs (SSIM)	0.3333	00000	00000	0.000	25.41	\$15.1367	\$0,000	0000 os	0000 0\$	1.1920	0000 0\$	\$0.000	\$15.1367	0000 0\$
														Total	199.7061	87.5985

Nonrecurring Cost Development

Tennessee A.14.11 - 4-Wire Copper Loop - long (Nonrecurring w/o LMU)

**Nonrecurring Cost** 

11/7/2000

	**************************************
Additional	Shared Cost \$0.0000 \$0.0000
	Direct Cost \$53.2092 \$53.2092
	\$122.0805 \$122.0805 \$122.0805 1.0030 \$122.4484 \$122.4484
First	Shared Cost \$0.0000 \$0.0000
	Direct Cost   \$122.0805 \$122.0805
	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost

#### Nonrecurring Cost Development

				\$0 5455	6848	\$0 2718	5138	3724	4719	0000	5734	7756	0000 05	53.2092			To the	5455	\$1.6848	\$0 2718	5138	3724	4719	0000	5734	7756	0000	53.2082
	H*D+G	100	Additional	3	S	<b>3</b>	-	~	55	<b>3</b>	<b></b>	\$38	8	¥i		TELRIC	Additional	2	5	2	<u>.</u>	<u>.</u>	\$	3	. 23	838	\$	S
	Ť	Ž		\$0.5455	\$1,6848	\$10873	\$2,7753	\$1 3724	\$22 9477	\$1 0920	\$7,1468	\$68 2921	\$15,1367	122.0805		TEI	First	\$0 5455	\$1 6848	\$1.0873	\$2 7753	\$1 3724	\$22.9477	\$1 0920	\$7 1468	\$68 2921	\$15 1367	122.0805
	<b>L</b>	connect	Additional	0000 0\$	\$0.000	00000	0000 0\$	0000 0\$	20 0000	0000 0\$	0000 O\$	20 0000	0000 o <b>\$</b>	Total	connect		Additional	0000 0\$	0000 0\$	0000 0\$	20.000	0000 O\$	0000 0\$	\$0.000	0000 0\$	0000 0\$	\$0,000	<b>1</b>
	G=ExF	Discounted Disconnect	First	0000 0\$	0000 0\$	20 0000	0000 05	20 0000	0000 0\$	0000 o <b>\$</b>	\$0 0000	0000 0\$	\$0.000		Discounted Disconnect	Coet	Ē	00000\$	0000 os	0000 o <b>\$</b>	0000	20 0000	0000 0	0000 O <b>\$</b>	\$0.0000	0000'0\$	\$0.000	
	u.	Disconnect	Factor	1.1920	1.1920	1 1920	1 1920	1.1920	1 1920	1 1920	1.1920	1.1920	1.1920		Disconnect	Discount	Factor	1.1920	1.1920	1.1920	1.1920	1.1920	1.1920	1.1920	1.1920	1.1920	1.1920	
	ý	nect	Additional	\$0,000	\$0.000	0000 0\$	\$0.000	\$0,000	0000 0\$	\$0.0000	\$0 0000	\$0,000	\$0.0000		nect		Additional	0000 0\$	0000 0\$	\$0 0000 \$	\$0.0000	0000 os	\$0,000	0000 OS	20 0000	\$0.000	\$0.000	
	E=8xC	Disconnect	Frat	00000\$	0000 O\$	0000 0\$	0000 O\$	\$0,000	0000 0\$	0000 o <b>\$</b>	\$0,000	00000\$	0000 0\$		Disconnect	Cost	First	20.0000	20.0000	0000 0\$	0000	0000 0\$	0000 Q#	0000 OS	00000	20 0000	\$0,000	
//o LIMU)	ပ္	T =	Additional	\$0.5455	\$1,6848	\$0.2718	\$1 5138	\$1.3724	\$5.4719	\$0.0000	\$3 5734	\$38.7756	\$0.0000		=		Additional	\$0.5455	\$1.6848	\$0.2718	\$1.5138	\$1.3724	\$5.4719	0000 o <b>\$</b>	\$3.5734	\$38.7756	\$0,000	
g (Nonrecurring v	D=AxC	Install	Ē	\$0.5455	\$1,6848	\$1.0673	\$2.7753	\$1 3724	\$22 9477	\$1.0920	\$7,1468	\$68 2921	\$15.1367		Install		First	\$0.5455	\$1 6848	\$1.0873	\$2.7753	\$1.3724	\$22.9477	\$1.0920	\$7 1466	\$68 2921	\$15,1367	
A14.11 - 4-Wire Copper Loop - long (Nonrecurring w/o LMU)	U	Direct	Rate	\$31.17	<b>26</b>	\$32.62	\$33.64	\$34.31	\$38.31	\$32.76	\$45.04	<b>7</b> 5 <b>7</b>	<b>2454</b> 1		TELRIC	Labor	Rade	\$31.17	7.07	\$32.62	\$33.64	234 31	\$38.31	\$32.76	<b>27</b> 50	<b>2</b> 25.	<b>2</b> 25.41	
.14.11 - 4-Wire C		¥	퓻	0.000	00000	0.000	00000	0 0000	00000	00000	0.0000	0000	0.000		¥		Additional	0000	0000	0000	0000	00000	0000	0000	00000	0000	0.000	
	<b>s</b> o	Disconnect	First	00000	00000	0000	00000	00000	00000	00000	00000	0000	00000		Disconnect	Worktime	Fre	00000	0000	00000	0000	00000	00000	00000	0000	00000	0000	
		ion	Additional	0.0175	0.0416	0 0083	0.0450	0 0400	0 1428	00000	0 0820	0.8539	0.0000		ş	;	Additional	0.0175	9170	0.0063	0000	0.0400	0 1428	0000	0.0850	0.8539	0000	
	<	Installation	First	0.0175	00416	0 0333	0.0825	0 0400	0.5990	0 0333	0.1700	1 5039	0.3333		Installation	Worktimes	First	0.0175	9110	0 0333	0.0625	0000	0.5990	0.0333	0.1700	1 5039	0 3333	
		JFC/Payband	- :	Customer Point Of Contact - ICSCALCSC	Job Grade 57	Service Advocacy Center (SAC)	Circuit Provisioning Group (CPG)	Address & Facility Inventory (AFIG)	Acc Cust Advocate Cntr (ACAC)	Work Management Center (WMC)	CO install & Mice Field - Ckt & Fac	Install & Mice - Spec Svcs (SSIM)	Install & Mice - Spec Svcs (SSIM)			JFC/Payband	Description	Customer Point Of Contact - ICSC/LCSC	Job Grade 57	Service Advocacy Center (SAC)	Circuit Provisioning Group (CPG)	Address & Facility Inventory (AFIG)	Acc Cust Advocate Cntr (ACAC)	Work Management Center (WMC)	CO Install & Mice Field - Citt & Fac	Install & Mice - Spec Svcs (SSRM)	Install & Mice - Spec Svcs (SSIM)	
		J. C.	Payband	230X	7657	AFXX	4N4X	¥ X IX	4AXX	4WXX	431X	411X	411X			JEC.	Payband	230X	1657	4FXX	Y Y	*IX	*YXX	4WXX	431X	<b>4</b>	¥1.	
	11/7/2000		Function	SERVICE ORDER	ENGINEERING	ENGINEERING	ENGINEERING	ENGINEERING	CONNECT & TEST	CONNECT & TEST	CONNECT & TEST	CONNECT & TEST	TRAVEL				Function	SERVICE ORDER	ENGINEERING	ENGINEERING	EMGMEERING	ENGINEERING	CONNECT & TEST	CONNECT & TEST	CONNECT & TEST	CONNECT & TEST	TRAVEL	

Tennessee A.14.898 - 4-Wire Copper Loop - short (Nonrecurring w/ LMU) - Testing

Nonrecurring Cost

11/7/2000

	TELRIC \$100,1280	\$100.1280 1.0030	\$100.4297 1.0000	\$100.4297
Additional	Shared Cost	X 0000:0\$	" ×"	
	Direct Cost \$100.1280	\$100.1280		
	TELRIC \$102.5102	\$102.5102 1.0030	\$102.8191 1.0000	\$102.8191
First	Shared Cost \$0.0000	X 0000:0\$	" ×"	
	Direct Cost \$102.5102	\$102.5102		
	Nonrecurring Cost Development Sheet Col H	Total Cost Gross Receipts Tax Factor	Cost (including Gross Receipts Tax) Common Cost Factor	Nonrecurring Economic Cost

		H=D+G	Direct Cost	Additional \$46 54 14	\$2,3623 \$51,2043 100,1280		<u>.</u>	Additional \$46 5414 \$2 3623 \$51 2043 100.1280
		Ŧ	Oire	First \$46 5414	\$51,2043 102,5102		TEIDI	First \$46 5414 \$4 7645 \$51.2043 102.5102
		u.	raconnect t	Additional \$0 0000	\$0 0000 Total			Additional \$0.0000 \$0.0000 \$0.0000 Total
		G=ExF	Cost	First \$0.0000 \$0.0000	\$0.000	Discounted Discounses	200	First \$0.0000 \$0.0000 \$0.0000
	ų	Disconnect	Discount	1.1920	1.1920	Disconnect	Discount	1.1920 1.1920 1.1920
	ç	<b>1</b>	Additional	\$0,000 \$0,000	0000 0\$	Ę.	A4481	0000 05 0000 05
	E=BxC	Disconnect	Cost	0000 03	9999	Disconnect	Cost	0000 0\$ 0000 0\$
w/ LMU) - Testing	Ş	3 -	Additional	\$2.3823		=.	Additional	\$2.3823 \$51.2043
rt (Nonrecurring	D≈AxC	Install	First	\$46.5414 \$4.7645 \$51.2043		fa fa	First	\$46.5414 \$4.7845 \$51.2043
A.14.898 - 4-Wire Copper Loop - short (Nonrecurring w/ LMU) - Testing	ပ	Direct	Rate	\$38.31 \$42.04 \$45.41		TELRIC	Rate	\$38.31 \$42.04 \$45.41
14.898 - 4-Wire C		nect	Additional	00000		ij,	Additional	00000
₹	<b>6</b> 0	Disconnect	First	00000		Disconnect Worldtimes	First	00000
		Blon	Additional 1.2149	0.0567		5 =	1 2149	1.1276
	∢	Worklimes	1.2149	0.1133		Installation Worktlimes	12149	0.1133
		JFC/Payband Dear-rivological	Acc Cust Advocate Cntr (ACAC)	CO mistall is Mice Field - City is Fac Instalt is Mice - Spec Svcs (SSMI)		JFC/Payband Description	Acc Cust Advocate Cnir (ACAC)	CO Install & Mice Fed - Ctt & Fec Install & Mice - Spec Syca (SSIM)
		JFC/ Payband	XX :	4:14 4:14		JFC/ Payband		X X
11/7/2000			CONNECT & TEST	CONNECT & TEST		Function	CONNECT & TEST	CONNECT & TEST

Tennessee

U) - Disconnect	Nonrecurring Cost	Direct Shared Cost Cost
A.14.899 - 4-Wire Copper Loop - short (Nonrecurring w/ LMU) - Disconnect	Nonrecur	Shared   Cost   TELRIC
	11/7/2000	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost

			\$0 2386 \$2 2833 \$4 9695 \$10 8259 \$0 0000 24.7771	Additional 86 1925 80 2673 80 286 82 288 82 288 81 0 8259 85 10 8259 85 10 8259 85 1711
		H=D+G Direct Coat First Ad \$18 5776 \$1,7711	\$0.2386 \$22.0263 \$10.6489 \$46.0101 \$18.0432 117.3156	TELRIC First \$18.5776 \$1.7711 \$0.2366 \$22.0263 \$10.6489 \$46.0101 \$18.0432 117.3159
	ų,	Maconnect Additional \$6 1925	\$10.0259 \$10.0259 \$10.0259 \$0.0000	### ##################################
	Ö	Discounted Disconnect Cost First \$18 5776 \$6 11 67 2306	\$22.0263 \$10.6489 \$46.0101 \$18.0432	Discounted Disconnact  Cost Addition \$18.5771 \$18.7711 \$2.387.771 \$4.0710 \$1.00 459 \$1.00 649 \$1.00 649 \$1.00 649 \$1.00 649 \$1.00 649
		Disconnect Discount Factor 1, 1920 1, 1920	1,1920 1,1920 1,1920 1,1920	Discounset Discount Factor 11920 11920 11920 11920 11920
	E=BxC	Disconnect  Cost  Additional  \$5 1950 \$5 1950 001 \$0.2001	\$1 9155 \$4.1690 \$9.0820 \$0.0000	Additional 25 1950 80 2243 80 2001 81 9155 87 91000 84 91 915 84 90 0000
-	ü	Disco C First \$15.5850 \$1.4658 \$0.2001	\$18 4762 \$8 9335 \$36.5965 \$15.1367	Disconnect Cost Cost S15.950 Ad S15.950 S201 S18.4558 S8
" Foob - Briort (Nonrecurring w/ LMU) - Disconnect	D=Arc	Coet Additional \$0 0000 \$0 0000 \$0 0000	0000 03 0000 03 0000 03	### Additional ### ### #### #######################
Nonrecurring w/ [	۵	First C	0000 0\$	First Cost (1) (2) (2) (3) (3) (3) (3) (3) (3) (3) (3) (3) (3
	ပ	Direct Labor Rate 831.17 836.431 534.31	#254 #254 #554	TELRIC Labor Rate 833117 833 63 834 31 842 64 845 41 845 41
didon anno anno	60	Disconnect   Worktimes   Additional	0 0000	Additional Additional 0.067 0.0067 0.0068 0.0069 0.0090 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
		Pirat Work First 0.5000 0.042 0.0058 0.4823	0.2125 0.8500 0.3333	Disconnect Worktines Worktines First 0 5000 0 0442 0 0048 0 4823 0 2125 0 5500 0 3333
	<	Morktime  Modification  Modifi	0000 0 0000 0	Additional 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.000000
		First 0.0000 0.0000 0.0000 0.0000	00000	hetaletion Worthmes 0 0000 0 0000 0 0000 0 0000 0 0000 0 0000 0 0000
			CO make whether to Cottle factoring & Michael & Michael Speec Svets (SSIM) heatelf & Michael Speec Svets (SSIM)	JF C/Payland Description Custome Point of Contine - ICSC/ICSC Circuit Provisioning Group (CPG) Address if Earth Privality (AFG) Ac Cust Advocate Cote (ACAC) CO Intal & Mice - Spec Street (SSM) Intal & Mice - Spec Street (SSM) Intal & Mice - Spec Street (SSM)
		Payband 7 230X 4N4X 4N4X 4AXX		Paylend 230X 4M1X 4M1X 4AXX 431X 411X 411X
11/7/2000		Function SERVICE INQUIRY ENGINEERING ENGINEERING COMNECT & TEST COMNECT A TEST	CONNECT & TEST TRAVEL	Function SERVICE INCLIRY ENGINEERING CONNECT & TEST CONNECT & TEST TRAVEL

Tennessee A.14.998 - 4-Wire Copper Loop - short (Nonrecurring w/o LMU) - Testing

11/7/2000

Nonrecurring Cost

Additional			\$0.000	×	\$100.4297	X 1.0000 \$100.4297
		\$0.0000 \$102.5102	\$0.0000 \$102.5102	C10030	X 1.0000	\$102.8191
First	Sh	\$102.5102				
		Total Cost		Cost (including Gross Receipts Tax)	Noncommittee Formation	consecuting Economic Cost

		G=EXF	Additional Factor First Additional First Pirst	\$0,0000 \$0,0000 11920 \$0,0000 \$0,0000 \$4,65414 \$46,5414 \$0,0000 \$0,0000 11920 \$0,0000 \$0,0000 \$4,765 \$2,3823	Total 102.5102	Disconnect Disconnect Discounted Disconnect	Additional Factor First Additional First	0000.0\$ 000	30 0000 \$0 0000 \$0 0000 \$51 2043
A. 14.758 - 4-Wire Copper Loop - short (Nonrecurring w/o LMU) - Testing	C D=AxC		\$46.5414 \$46.5414	\$42.04 \$4.7645 \$2.3823 \$45.41 \$51.2043 \$51.2043		TELRIC install Cost	S46 S414 S46 S414	\$42.04 \$4.7645 \$2.3823 \$45.41 \$51.2043 \$51.2043	
A. I.S. Wild Copper	œ	Disconnect Worktimes	0.	00000		Disconnect Worktimes	00000	76 0.0000 0.0000 78 0.0000 0.0000	
	<	Installation Worklines First Additional	1.2149	1.1276		Installation Workdimes First Additional	1,2149	IM) 1.1276 1.1276	
		JFC/ JFC/Payband Payband Description	4AXX Acc Cust Advocate Cnir (ACAC) 431X CO Install & Mice Field - Ckt & Fac	411X Install & Mice - Spec Svcs (SS		JFC/ JFC/Payband Payband Description	4AXX Acc Cust Advocate Chir (ACAC) 431X CO Install & Mice Field - Ckr & Far-		
11/7/2000		Function				Function		CONNECT & TEST	

Tennessee A.14.999 - 4-Wire Copper Loop - short (Nonrecurring w/o LMU) - Disconnect

11/7/2000

Nonrecurring Cost

	\$19.2348 \$19.2348 \$19.2348 \$19.2928 ( 1.0000 \$19.2928
Additional	Shared Cost \$0.0000 \$0.0000
	Direct Cost \$19.2348 \$19.2348
	\$99.3883 \$99.3883 1,0030 \$99.6877 1,0000
First	Shared Cost \$0.0000 \$0.0000 X
	Direct Cost \$99.3883 \$99.3883
	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost

		D+0=H	Direct Cost Additional		3 \$2 2833 9 \$4 9695 1 \$10 8259		<u> </u>	Additional			•	\$0 0000 \$1 19.2348
			Ē	<u> </u>	\$22.0263 \$10.6489 \$46.0101 \$18.0432	•	-		\$0 6502	\$0 2386	\$10 6489 \$46 0101	\$18.0432
		G=ExF Discounted Disconnect	Additional	\$0.6502 \$0.2673 \$0.2386	\$2 2833 \$4 9695 \$10.8259 \$0.0000	Total	Disconnect		\$0.6502 \$0.2673	\$0,2386	\$10.8259	\$0.0000 Total
	•	Discounted	Ĕ	\$0.6502 \$1.7711 \$0.2386	\$22 0263 \$10 6489 \$46 0101 \$18.0432		Discounted Disconnect Cost	First	\$1 7711	\$0 2386	\$10 6489 \$46.0101	\$18.0432
	u	Disconnect	Factor	1.1920	1.1920 1.1920 1.1920		Disconnect	Factor	1 1920	1.1920	1.1920	1.1920
	E≈BxC	inect M		\$0.2243 \$0.2043 \$1.9155 \$4.1580 \$9.0620 \$0.0000			Additional So SASS	\$0.2243	\$1.0156	\$4.1690 \$9.0620	00000	
		Disconnect	First	\$1.4656	\$6.9336 \$38.5865 \$15.1367		Disconnect Cost	\$0 5455	\$0.2001	\$18 4762	\$38.5965	
IU) - Disconnect	. D=AxC		Additional	\$0.0000 \$0.0000 \$0.0000	\$0,000 \$0,000 \$0,000		Additional		0000 05	00000	0000 05	
recurring w/o LN		Cost	\$0.000	0000 0 <b>\$</b>	\$0.0000 \$0.0000 \$0.0000		First Cost	0000 0\$	000000	000000	0000 0\$	
14.998 - 4-Wire Copper Loop - short (Nonrecurring w/o LMU) - Disconnect	ပ	Direct Labor	\$31.17	\$33.64 \$34.31 \$38.31	Z Z Z Z		TELRIC Labor Rate				<b>245.4</b>	
9 - 4-Wire Coppe	6	nect mes Additional	0.0175	0.0067	0.200		Olscennect Worktimes First Additional 0.0175		0.0058	0.0992	0.000	
A14.98		Disconnect Worktimes First	0.0175	0.4823	0.333	i			0.0058	0.2125	0.3333	
	∢	llon nes Additional	00000	00000	00000	,	_ ₹	0000	00000	0.000	00000	
•		Installation Worktimes First Ac	00000	00000	00000	e de la constante de la consta	Worktimes First A	0.000	00000	0.000	0000	
			Curiomer Pow Of Contact - ICSC/LCSC Circuit Provisioning Group (CPG)	Address & Facility Inventory (AFIG) Acc Cust Advocate Cntr (ACAC) CO Install & Mice Field - Ckt & Fac	Install & Mice - Spec Svcs (SSIM) Install & Mice - Spec Svcs (SSIM)		JFCPayband Description Customer Point Of Contact - ICSCA CSC	Circuit Provisioning Group (CPG)	Address & Facility Inventory (AFIG) Add Cust Advocate Cntr (ACAC)	CO Install & Mice Field - Ckt & Fed for the Fed for th	Install & Mice - Spec Svcs (SSIM)	
		Peyband	SAX.			JFC/ Payband 230X		X X X	¥X	¥ ¥	411X	
11/7/2000		Function SERVICE ORDER	ENGINEERING	CONNECT & TEST CONNECT & TEST CONNECT & TEST	TRAVEL		Function SERVICE ORDER	ENGINEERING	CONNECT & TEST	CONNECT & TEST	TRAVEL	

Nonrecurring Cost Development

Tennessee A.14.1098 - 4-Wire Copper Loop - Iong (Nonrecurring w/ LMU) - Testing

11/7/2000

Nonrecurring Cost

Additional	Direct         Shared         TELRIC           Cost         \$0.000         \$100.1280           \$100.1280         \$0.000         \$100.1280           \$100.1280         \$0.0000         \$100.1280           X         1.0030           \$100.4297         \$100.4297
First	Shared  Cost \$0.0000 \$102.5102 \$0.0000 \$102.5102  X 1.0030  \$102.8191  X 1.0000
	Nonrecurring Cost Development Sheet Col H \$102.5102  Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor  Nonrecurring Economic Cost

		9+0+P	Direct Cost	1		6	Additional	l		
	-		First	\$46 5414 \$4 7645 \$51.2043	102.51	•	First	\$46 5414 \$4 7645 \$51 2043 102.5102		
	ų	Sconnect	Additional	0000 05		econnect	Additional	\$0.0000 \$0.0000 \$0.0000 Total		
	i i	Discounted Disconnect	First	0000 0\$	č	Cost	First	0000 0\$		
	u.	Disconnect	Factor	1.1920 1.1920 1.1920	Disconnect	Discount	Factor	1.1920 1.1920 1.1920		
	v	ţ		0000 05 \$0 0000 \$0 0000	Ę		Additional	0000 0\$ \$0 0000 0\$		
	E=BxC	Disconnect	First	0000 0 <b>\$</b>	Disconnect		First	0000 05 0000 05		
/ LMU) - Testing	ú	=	Additional S46 5414	\$2.3823		Addist	S46 5414	\$2.3823		
g (Nonrecurring w			First \$46.5414	\$4.7645 \$51.2043	Matall	100	\$46.5414	\$4 7645 \$51.2043		
opper Loop - lon			Rate \$38.31	<b>84</b> 2 04 <b>8</b> 5 41	TELRIC	Rate	\$38.31	\$42.04 \$45.41		
- 1080 - 4-WIFE		190 E	0 0000	0.0000	¥ ;	Additional	00000	0.000		
ŧ	60			00000	Disconnect	First	00000	00000		
		Hon Nes Additional	12149	1.1276	5 <b>2</b>	Additional	1.2149	1.1276		
	∢	histaliation Worktimes First		1.1276	Installation Worktimes	!	1.2149 0.1133 1.1276			
		JFC/Payband Description	Acc Cust Advocate Cntr (ACAC) CO Install & Mice Field - CH & Eac	Install & Mice - Spec Svcs (SSIM)		Description	CO install & Mice Field - Cit & For	Install & Mice - Spec Sycs (SSIM)		
		JFC/ Payband	4400 431X	¥11X	) . ()	AAXA	431X	¥		
11/7/2000		- 1		CONNECT & TEST		CONNECT & TEST		CONNECT & TEST		

Tennessee A.14.1099 - 4-Wire Copper Loop - long (Nonrecurring w/ LMU) - Disconnect

11/7/2000

Nonrecurring Cost

	.	\$24.7771	\$24.7771	X 1.0030	\$24.8518	\$24.8518
Additional	Shared	\$0.0000	\$0.0000			
	Direct					
	TELRIC	\$117.3156	\$117.3156	\$117,6691	1.0000	\$117.6691
First	Shared Cost	\$0.0000	\$0.0000 \$			
	Direct Cost	\$117.3156	0010.7114			
		Nonrecurring Cost Development Sheet Col H Total Cost	Gross Receipts Tax Factor	Cost (including Gross Receipts Tax)	Common Cost Factor	Nomecuring Economic Cost

Page 2

		r.G.	Additional 86 1925 80 2386 82 2833 84 8995 810 829 80 000 24.7777	3
		H=D+G Direct Cost	\$18.5776 \$1.7711 \$0.2386 \$22.0263 \$10.6489 \$46.0101 \$18.0432 117.3156	First Feat Feat Feat Feat Feat Feat Feat Fea
	,	Misconnect	\$6.1925 \$0.2673 \$0.2863 \$2.2833 \$4.9696 \$10.0000 \$0,0000	Additional 86.1825 80.2873 80.2838 81.925 81.925 81.925 81.925 81.925 81.0825 81.0825 81.0825 81.0825 81.0825
	Č	Discounted Disconnect Cost	\$18 5776 \$1 7711 \$0 2386 \$22 0263 \$10.6489 \$46 0101 \$16 0432	Discounted Discounset Cost First Addition. 518.576 85 87.236 82.236 82.236 82.2063 82.2063 810.649 810.82 810.649 810.82
	u	Disconnect Discount Factor	1.1920 1.1820 1.1820 1.1920 1.1920 1.1920	Disconnect Discount Factor 1 1920 1 1920 1 1920 1 1920 1 1920 1 1920 1 1920 1 1920
	E=BxC	nnact et Additional	\$5.1950 \$0.2243 \$0.2041 \$1.9155 \$4.1690 \$9.0000	# Additional # Additional # 1990 # 19
	<u> </u>	Disconnect Cost First Ad	\$15.5850 \$1.4858 \$0.2001 \$18.4782 \$8.9335 \$38.5865 \$15.1367	Disconnect Cost First S15.566 81.458 82.001 82.001 82.001 82.001 82.001 83.15.1967
A.14.1009 - 4-Wire Copper Loop - long (Nonrecuring w/ LMU) - Disconnect	D≑AĸC	₹	0000 05 0000 05 0000 05 0000 05 0000 05	Additional 50 0000 50
onrecurring w/ LI	ä	Install Cost First	0000 0\$ 0000 0\$ 0000 0\$ 0000 0\$	First Cost 50 0000 50
er Loop - long (N	ပ	Direct Labor Rate	233.54 238.33 238.33 28.20 28.54 28.54	TELRIC Liabor Rid \$33.17 \$33.64 \$38.31 \$38.31 \$45.41 \$45.41
re - 4-vire Copp		mes Additional 0.1667	0 0067 0 0058 0 0500 0 0992 0 2000 0 0000	Additional 1667 0 0067 0 0067 0 0067 0 0067 0 0067 0 0067 0 0067 0 0060 0 0000 0 0000 0 0000 0 0 0000 0 0 0000
7.4.7		Worktimes Worktimes First Ac 0.5000	0 0442 0.0056 0.4823 0.2125 0.8500 0.3333	Disconnect Worktimes First Worktimes 6500 0500 00058 04823 02125 0500 03333
		, \$	0000 0000 0000 0000 0000 0000 0000	Additional 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.000000
	<	Worktimes First A	0000 0 0000 0 0000 0	Montalisation Wontaines First 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
			Address & Earthy Inventory (AFG) Install & Milce - Spec Svcs (SSIM) Install & Milce - Spec Svcs (SSIM)	JF C/Paysland  Describion Customer Point Of Contact - I.CSC/I.CSC Creat Provisioning Group (CPC) Address & Facily Inventory (AFC) Acc Cust Advocate Cure (ACA/C) CO Install & Mincs - Spec Svcs (SSIM) Install & Mincs - Spec Svcs (SSIM)
		Payband 230X 4N4X		JFC/ 230X 4M4X 4M1X 4AXX 431X 411X 411X
11/7/2000		Function SERVICE INQUIRY ENGINEERING	ENGINEERING CONNECT & TEST CONNECT & TEST CONNECT & TEST TRAVEL	Function SERVICE INCURY ENGINEERING ENGINEERING CONNECT & TEST CONNECT & TEST CONNECT & TEST TRAVEL

Tennessee A.14.1198 - 4-Wire Copper Loop - long (Nonrecurring w/o LMU) - Testing

11/7/2000

Nonrecurring Cost

Additional	Direct         Shared Cost         TELRIC           \$100.1280         \$0.0000         \$100.1280           \$100.1280         \$0.0000         \$100.1280           \$100.1280         \$100.1280           \$100.1280         \$100.1280           \$100.1280         \$100.1280           \$100.4297         \$100.4297
First	Direct         Shared           Cost         TELRIC           \$102.5102         \$0.0000         \$102.5102           \$102.5102         \$0.0000         \$102.5102           X         1.0030           \$102.8191         \$102.8191
	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost

	ğ	, ;	Additional	\$46 5414 \$2 3823 \$51 2043 100,1280	,		\$46.54.14 \$2.3823 \$51.2043
	D+0=H		First	\$46.5414 \$4.7645 \$51.2043 102.5102	İ	Ebas TELRIC	\$46,5414 \$4,7645 \$51,2043 102,5102
	<u>.</u>	Historiaect	Additional	\$0.0000 \$0.0000 \$0.0000	Maconnect	Additional	\$0.0000 \$0.0000 \$0.0000 Total
	G=ExF	Discounted Disconnect	First	0000 0\$ 0000 0\$	Discounted Disconnect	First	\$0 0000 \$0 0000 \$5 0000
	u.	Disconnect	Factor	1.1920 1.1920 1.1920	Disconnect	Factor	1 1920 1.1920 1.1920
	E=BxC	nnect	Additional	\$0.000 \$0.000 \$0.000	inect H	Additional	0000 05 00000 05 0000 05
•	Ξ	Disconnect Cost	First	\$0,000 \$0,000 \$0,000	Disconnect	First	000000 \$0,0000
Number of Court Court	D=AxC		Additional	\$2.3623 \$2.3623 \$51.2043	1.	Additional	\$46.5414 \$2.3823 \$51.2043
	ä	Install	F1781	\$51.2043	histail Cost	First	\$6.2043 \$51.2043
	ပ	Direct Labor	C. 82.3	#25# #5.4	TELRIC	Kete	<b>K</b> 200 <b>K</b> 541
		aconnect orktimes Addeloral	00000	00000	mect	Additional	00000
	_	Disconnect Worktimes	00000	00000	Disconnect Worldimes	00000	00000
		ition mes Additional	1.2149	1.1276	tion	1 2149	1.1276
	•	installation Worktimes First	1.2149	0.1133 1.1276	Installation Worktimes	12149	1.1276
		JFC/Payband Description	Acc Cust Advocate Cnir (ACAC)	CO install & Mice Field - Ckt & Fac Install & Mice - Spec Svca (SSIM)	JFC/Payband Description	Acc Cust Advocate Cntr (ACAC)	CO Install & Mice - Spec Svcs (SSIM)
		JFC/ Payband	<b>4</b> 400	431X	JFC/ Payband	4AXX	431X 411X
*****	0002///1			CONNECT & TEST	Function	CONNECT & TEST	COMMECT & TEST

Tennessee A.14.1199 - 4-Wire Copper Loop - Iong (Nonrecurring w/o LMU) - Disconnect

11/7/2000

Nonrecurring Cost

	TELRIC	\$19.2348	1.0030	\$19.2928 1.0000	\$19.2928
Additional	Shared Cost	\$0.000	×" }	×	
	Direct Cost				
	TELRIC	\$99.3883	1.0030	1.0000	\$99.6877
First	Shared	\$0.000	×	×	
	Direct Cost				
	Nonrecurring Cost Development Sheet Col H	Total Cost	Cost (including Gross Receipts Tax)	Common Cost Factor	

	H=D+	Direct C	First \$0.6502	\$1.7711	\$0 2386	\$22 0263	\$10.6489	\$18 0432	99.3083			TELRIC	First CO 6500	\$17711	\$0.2386	\$22 0263	\$10 6489	\$18.0432	20.766.5
	<u>.</u>	Deconnect	\$0 6502	\$0.2673	\$0 2386	\$2.2833		0000 0\$	Total		Heconnect		SO 6502	\$0.2673	\$0.2386	\$2 2833	5696 7	0000 0\$	5
	G=ExF	Discounted Disconnect Cost	\$0.6502	\$1 7711	\$0.2386	\$22,0263	\$10.0409 \$48.0104	\$18.0432			Discounted Disconnect	1	\$0,6502	\$1.7711	\$0.2386	\$22 0263	8 10 040B	\$16 0432	
	u.	Discount	1.1920	1.1920	1 1920	1 1020	1 1920	1.1920			Disconnect	Country	1.1920	1.1920	1.1920	1.1920	1920	1.1920	
	ķĊ	nect If	\$0 5455	\$0.2243	100.00	2001	29 0820	\$0 0000			j .	Additional	\$0.5455	\$0.2243	\$0.2001	5019.14 0019.12	29.082	00000	
	E=8xC	Disconnect Cost	\$0.5455	\$1.4858	\$18.4782	56 9335	\$38 5985	\$15.1367		i	Disconnect	Elast	\$0.5455	\$1.4858	\$0,2001	20,4:016	\$38.5985	\$15.1367	
IU) - Disconnect	ú	Additional	0000 0\$	00000	0000	0000 05	\$0.0000	\$0.000				Additional	0000 0\$	0000 05	00000	0000	0000 0\$	\$0.0000	
n ecurring w/o LN	D=AxC	Install Cost	0000 05	000005	00000	0000 05	\$0,000	0000 0\$		1	Cont	Fire	0000 0\$	0000 05		00000	\$0.000	\$0.000	
Tennessee A14.1198 - 4-Wire Copper Loop - Iong (Monrecurring wie LMU) - Disconnect	v	Direct Labor Rate	\$31.17	24.31	\$38.31	\$42.04	\$45.41	<b>245.41</b>		TELDIC	Labor	Rate	\$31.17	200	536.3	22.0	\$45.41	<b>145.41</b>	
B - 4-Wire Copper		ect nee Additional	0.0175	0.0058	00500	0.0982	0.2000	0.0000		ţ		Additional	0.0175	0.006	00200	0.0992	0 2000	0.0000	
A14.119	60	Disconnect Worktimes First Ac	0.0175	0 0058	0.4823	0.2125	0.8500	0.3333		Disconnect	Worltimes	First	0.0175	0.0058	0.4823	0.2125	0.8500	0.3333	
		iton nes Additions	0.000	00000	00000	00000	0000	0,000		Ş	1	Additional	0000	0000	0.000	00000	0000	0.000	
	<	Installation Worktimes First Ad	0.000	0000	0.000	0000	00000	00000		Installation	Worktimes	First	0.0000	00000	0000	0.0000	00000	0000	
		JFC/Payband Description	Circletomer Point Of Confact - ICSCALCSC Circuit Provisioning Group (CPG)	Address & Facility Inventory (AFIG)	Acc Cust Advocate Cnfr (ACAC)	CO Install & Mice Field - Ckt & Fac	Fretail & Mice - Spec Svcs (SSIM)	MINISTER OF MINISTER ( DOME)			JFC/Payband	Description	Customer Point Of Contact - ICSC/LCSC Circuit Provisioning Group (CPC)	Address & Facility Inventory (AFIG)	Acc Cust Advocate Cntr (ACAC)	CO Install & Mice Field - Cki & Fac	install & Mice - Spec Svcs (SSIM)	FEBRUAR & MICH - SPEC SVCE (SSIM)	
		JFC/ Payband	4 4 4 X	4M1X	4AXX	431X	¥	•			) (1)	Paydend	4067 4N4X	4M1X	4AXX	431X	¥ ;	<u> </u>	
	11/7/2000	Function	ENGINEERING	ENGINEERING	CONNECT & TEST	COMMECT & TEST	TRAVE				:	Function	ENGINEERING	ENGINEERING	CONNECT & TEST	CONNECT & TEST	TDAYEL B IEST		

noval - long

A.17.2 - Unbundled Loop Modification - Load Coil / Equipment Removal -	fication - Load Coil	/ Equipment Removal -
11/7/2000		Nonrecurring Cost
Nonrecurring Cost Development Sheet Col H  Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor	Direct Cost \$321.0182	Shared  Cost \$0.0000 \$0.0000  X
Monte cutting Economic Cost		1

Tennessee
1.17.2 - Unbundled Loop Modification - 1 and Coll / Emiliand

	H=D+G	Direct Cost \$0.5679 \$0.480 \$76.008 \$4.324 \$14.324 \$10.6375	TELRIC \$0.5679 \$0.4880 \$76.0088 \$4.5396 \$14.3244 \$214.4520 \$10.6375
	G=ExF	Discounted Discounted Cost \$0.0000 \$0.0000 \$0.0000 \$0.0000 \$0.0000 \$0.0000 Total	Discounted Discounted Cost \$0.0000 \$0.0000 \$0.0000 \$0.0000 \$0.0000 \$0.0000 \$0.0000 Total
	щ	Disconnect Discount Factor 1,0000 1,0000 1,0000 1,0000 1,0000 1,0000	Disconnect Discount Factor 1,0000 1,0000 1,0000 1,0000 1,0000 1,0000 1,0000 1,0000
Б	E=BxC	Disconnect Cost \$0.0000 \$0.0000 \$0.0000 \$0.0000 \$0.0000 \$0.0000 \$0.0000	Disconnect Cost \$0.000 \$0.0000 \$0.0000 \$0.0000 \$0.0000 \$0.0000 \$0.0000 \$0.0000
ent Removal - lor	D=AxC	Cost \$0.5679 \$0.4880 \$76.008 \$4,5396 \$14,3244 \$214,4520 \$10.6375	Install Cost \$0.5679 \$0.4880 \$76.0088 \$4.5396 \$14.3244 \$214.4520
ad Coil / Equipm	ပ ·	Direct Labor Rate \$51.17 \$31.17 \$40.54 \$32.62 \$34.31 \$42.55	TELRIC Labor Rate \$51.17 \$31.17 \$32.62 \$34.31 \$42.55 \$42.55
Modification - Lo	<b>6</b> 0	Disconnect  Worktime 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	Disconnect Workline 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
C. 1.1 Unbundred Loop Modification - Load Coil / Equipment Removal - long	∢	Morkulme 0.0111 0.0151 1.8750 0.1392 0.4175 5.0400	Worktime 0.0111 0.0157 1.8750 0.4175 5.0400 0.2500
4		Description Systems Designer w/Sales Com Customer Point Of Contact - ICSC/LCSC Job Grade 57 Service Advocacy Center (SAC) Address & Facility Inventory (AFIG) Outside Plant Constr (OSPC)	JFC/Payband  Description Systems Designer w/Sales Com Customer Point Of Contact - ICSC/LCSC Job Grade 57 Service Advocacy Center (SAC) Address & Facility Inventory (AFIG) Outside Plant Constr (OSPC)
		Payband SDWC 230X 230X JG57 4FXX 4M1X 420X 420X	JFC/ SDWC 230X JGS7 4FXX 4M1X 420X 420X
11/7/2000	0007	Function SERVICE INQUIRY SERVICE INQUIRY ENGINEERING ENGINEERING ENGINEERING CONNECT & TEST TRAVEL	Function SERVICE INDUIRY SERVICE INDUIRY ENGINEERING ENGINEERING ENGINEERING CONNECT & TEST TRAVEL

11/7/2000

Tennessee A.17.4 - Unbundled Loop Modification - Additive

Nonrecurring Cost

Additional	Shared	\$12.3214 Cost TELRIC	\$0.000	X 1.0030	\$12.3586	1,0000 \$12,3586	
	TELBIC	\$12.3214	\$12.3214	412 3586	X 1.0000	\$12.3586	
First	Shared Cost	\$0.000	\$0.000				
	Direct Cost	\$12.3214	\$12.32 I4				
	No.	Total Cost Development Sheet Col H	Gross Receipts Tax Factor	Cost (including Gross Receipts Tax)	Common Cost Factor	Nonfecurring Economic Cost	

	a	Additional 80 0914 80 0914 80 0918 83 0078 80 0785 80 5762 80 5762 87 90 77 9 80 4279 12.3214	60 0784 80 0784 80 0785 80 0574 80 1826 87 9774 12.3214
	9+0÷H	Piret Cost First Ad \$0.0914 \$0.0914 \$0.0785 \$1.0574 \$0.1626 \$0.5762 \$1.0574 \$0.1626 \$1.79074 \$1.3214	First 50 0914 50 0914 50 0914 50 0914 50 0974 50 1826 50 1826 50 4279 50 4274 12.3214
	XF Mercenners	# Additional \$0.0000 \$	### Second ### ### ### ### ### ### ### ### #### ####
	G=ExF Discounted Discounses	First Cont. 80 0000 80	Discounted Disconnect Cost Addition 50 0000 \$50 000 \$50 0000 \$50 000 \$50 0000 \$50 000 \$50 0000 \$50 000 \$50 0000 \$50 000 \$50 0000 \$50 000 \$50 0000 \$50 000 \$50 0000 \$50 000 \$50 0000 \$50 000 \$50 0000 \$50 000 \$50 0000 \$50 000
	F Disconnect	Placount   Factor   10000   10	Disconnect Discount Factor 1,000 1,000 1,000 1,000 1,000
	in the state of th	Additional 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000	Additional 50 000 000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000 50 0000
	E=BxC Disconnect	First Cost 80 0000 80 0000 80 0000 80 0000 80 0000 80 0000 80 0000 80 0000 80 0000 80 0000 80 0000 80 0000 80 0000	Pieconnect   Cost   Cost   Fiet   Cost   St 0000   St
	Q =_	Additional 50 0914 50 0914 50 0914 50 0785 53 0574 50 1826 50 5762 50 5762 50 4279	Additional 50.0914 50.0785 81.0574 50.1828 80.572 81.0574 80.14279
dification - Additi	D=AvC Install	First 50 0914 80 0874 83 0874 80 1826 90 5762 87 0874	First Cost 50 00 14 00 14 00 14 00 14 00 14 00 15 00 1
A.17.4 - Unbundled Loop Modification - Additive	_	1	TELRIC Labor Rate 841 17 841 17 842 65 842 55 842 55 842 55
A17.4 - Un	¥	Additional 0 0000 0 0000 0 0000 0 0000 0 0000 0 0000	Additional 0 0000 0 0000 0 0000 0 0000 0 0000 0 0000
0	Disconnect	00000 0 0000 0 0000 0 0000 0 0000 0 0000 0 0000	Disconnect Worklime Worklime First 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
	Bon Mes	0.01018 0.0025 0.0056 0.0168 0.0168	Additional O.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.025 0.0105 0.
<	installation Worktimes	0.0018 0.0025 0.0056 0.0168 0.0161	Monthheelon Workshines Workshines Workshines CO018 0.0025 0.0025 0.0026 0.0026 0.0026 0.0026 0.0026
	JF C/Payband Description	Systems Designes wiSales Com Customer Point Of Contact - ICSC/LCSC Job Grade 57 Service Account Center (SAC) Address & Facility Investory (AFIG) Outside Plant Constr (OSPC)	JF Crit Perhand Describtion Describtion Customer Point of Contact - ICSC,LCSC Job Grads 57 Service Advocacy Centre (SAC) Advocas 6 Facility Investory (AFG) Outside Plant Const (OSPC) Outside Plant Const (OSPC)
	-		Pryland SDWC SDWC SDWC SDWC SWK SWK SWK SWK SWK SWK SWK SWK SWK SWK
11/7/2000	Function	SERVICE MOUHY SERVICE MOUHY ENGINEERING ENGINEERING ENGINEERING COMNECT & TEST TRAVEL	Function SERVICE INCLINY SERVICE INCLINY SERVICE INCLING ENGINEERING ENGINEERING ENGINEERING CONNECT & TEST TRAVEL

Tennessee J.3.3 - Manual Loop Make-up w/o Facility Reservation Number

11/7/2000

	\$74.2342 \$74.2342 1.0030 \$74.4579 1.0000
Nonrecurring Cost	\$0.0000 ×
	Direct Cost \$74.2342 \$74.2342
11/7/2000	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost
11/7	Nonr Total Gros Cost Com

J.3.3 - Manual Loop Make-up W/o Facility Reservation Number

	H=D+G		\$27.2054 \$23.3775 \$15.4963 \$8.1550	-	\$27.2054 \$27.2054 \$23.3775 \$15.4963 \$8.1550 74.2342
	G=ExF	Discounted Disconnect	\$0.0000 \$0.0000 \$0.0000 \$0.0000	Discounted Disconnect	\$0.0000 \$0.0000 \$0.0000 \$0.0000 Total
Co. 3 - mailidal Loop Make-up W/o Facility Reservation Number	Ľ	Disconnect Discount	1	Disconnect Discount	1.0000 1.0000 1.0000 1.0000
	E=BxC	Disconnect Cost	\$0.0000 \$0.0000 \$0.0000 \$0.0000	Disconnect	\$0.000 \$0.0000 \$0.0000 \$0.0000 \$0.0000
	D=AxC	Install	\$27.2054 \$23.3775 \$15.4963 \$8.1550	Install	\$27.2054 \$23.3775 \$15.4963 \$8.1550
	၁	Direct Labor Rate	\$51.17 \$31.17 \$40.54 \$32.62	TELRIC Labor Rate	\$51.17 \$31.17 \$40.54 \$32.62
	<b>6</b> 0	Disconnect Worktime	0.000 0.000 0.000 0.000	Disconnect Worktime	0000 0 0000 0
	∢	Installation	0.5317 0.7500 0.3823 0.2500	Installation Worktime	0.5317 0.7500 0.3823 0.2500
		JFC/Payband  Description Systems Designer w/Sales Com	Customer Point Of Contact - ICSC/LCSC Job Grade 57 Service Advocacy Center (SAC)	JFC/Payband Description	Systems Designer Wisales Com Customer Point Of Contact - ICSC/LCSC Job Grade 57 Service Advocacy Center (SAC)
		JFC/ Payband SDWC	230X JG57 4FXX	JFC/ Payband	230X JG57 4FXX
11/7/2000	0007/111	Function SERVICE INQUIRY	SERVICE INQUIRY ENGINEERING ENGINEERING	Function SERVICE INDITIES	SERVICE INQUIRY ENGINEERING ENGINEERING

	<del>*</del>	**************************************
eservation Number	Nonrecurring Cost	Shared
J.3.4 - Manual Loop Make-up w/ Facility Reservation Number		Direct Cost \$76.9525 \$76.9525
J.3.4 - Manual Loop	Q	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost
	11/7/2000	Nonrecurring Co Total Cost Gross Receipts T Cost (including G Common Cost Fa

			J.3.4 - Manual Lo	.3.4 - Manual Loop Make-up w/ Facility Reservation Number	scility Reservation	Number				
117/2000			∢	æ	ပ	D=AxC	E=BxC	<b>L</b>	G=ExF	9+0=H
Function	JFC/ Payband	JFC/Payband Description	Installation Worktime	Disconnect Worktime	Direct Labor Rate	Install	Disconnect	Disconnect Discount	Discounted Disconnect	Direct
SERVICE INQUIRY SERVICE INQUIRY ENGINEERING ENGINEERING	230X 230X JG57 4FXX	SDWC Systems Designer w/Sales Com 230X Customer Point Of Contact - ICSC/LCSC JG57 Job Grade 57 4FXX Service Advocacy Center (SAC)	0.5317 0.7500 0.3823 0.3333	0.000 0.000 0.0000 0.0000	\$51.17 \$31.17 \$32.62	\$23.375 \$23.375 \$15.4963 \$10.8733	\$0.000 \$0.000 \$0.000 \$0.000	1.0000 1.0000 1.0000 1.0000	\$0.0000 \$0.0000 \$0.0000 \$0.0000 \$0.0000	\$27.2054 \$23.3775 \$15.4963 \$10.8733 76.9525428
1	JFC/ Payband SDWC	JFC/Payband  Description Systems Designer w/Sales Com	Installation Worktime	Disconnect Worktime	TELRIC Labor Rate	Install Cost	Disconnect Cost	Disconnect Discount Factor	Discounted Disconnect Cost	TELRIC
SERVICE INQUIRY ENGINEERING ENGINEERING	230X JG57 4FXX	Customer Point Of Contact - ICSC/LCSC Job Grade 57 Service Advocacy Center (SAC)	0.7500 0.3823 0.3333	0.0000	\$31.17 \$31.17 \$32.62	\$27.2054 \$23.3775 \$15.4963 \$10.8733	\$0.0000 \$0.0000 \$0.0000 \$0.0000	1.0000 1.0000 1.0000 1.0000	\$0.0000 \$0.0000 \$0.0000 \$0.0000 Total	\$27.2054 \$23.3775 \$15.4963 \$10.8733 76.9525

tral Office		\$370.5127 \$370.5127 \$370.5127 1.0030 \$371.6291 1.0000
e Capacity in the Cen	Nonrecurring Cost	Shared Cost \$0.0000 \$0.0000 X X
ı ennessee Splitter System 96-Lin	_	Direct Cost \$370.5127 \$370.5127
rennessee J.4.1 - Line Sharing Splitter - per Splitter System 96-Line Capacity in the Central Office	11/9/2000	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost

J.4.1 - Line Sharing Splitter - per Splitter System 96-Line Capacity in the Cantral Office.

	H=D+G	Direct Cost \$144.6380 \$152.9400 \$23.0658 \$34.2839 \$15.5850 370.6127	TELRIC \$144 6380 \$152 9400 \$23.0658 \$34.2839 \$15.5850
	G=Exf	Discounted Disconnect Cost \$0.0000 \$0.0000 \$0.0000 \$0.0000 \$0.0000 Total	Discounted Discounted Discounted Coef \$0.0000 \$0.0000 \$0.0000 \$0.0000 \$0.0000 Total
	L	Disconnect Discount Factor 1.1681 1.1681 1.1681 1.1681	Disconnect Discount Factor 11681 11681 11681 11681
	E=BxC	Disconnect Cost \$0.0000 \$0.0000 \$0.0000 \$0.0000 \$0.0000	Disconnect Cost \$0.0000 \$0.0000 \$0.0000 \$0.0000 \$0.0000
the Central Office	D=AxC	Install Cost \$144.6380 \$152.9400 \$23.0658 \$34.2839 \$15.5850	Install   Cost   \$144.6380   \$152.9400   \$23.0658   \$34.2839   \$15.5850
Line Capacity in	U	Direct Labor Rate \$36.16 \$50.98 \$31.17 \$51.17	TELRIC Labor Rade \$36.16 \$50.98 \$31.17 \$51.17
The opinion system so Line Capacity in the Central Office	œ	Disconnect Worldine 0.0000 0.0000 0.0000 0.0000 0.0000	Disconnect  Worktime 0.0000 0.0000 0.0000 0.0000
	∢	Morktime 4.0000 3.0000 0.7400 0.5000	Installation     Worktime
		JFC/Payband  Description Job Grade 56  Ntwk & Eng Planning (FG20) Complex Resale Support Group (CRSG) Systems Designer w/Sales Com Customer Point Of Contact - ICSC/LCSC	JFC/Payband  Description Job Grade 56 Ntwk & Eng Planning (FG20) Complex Resale Support Group (CRSG) Systems Designer w/Sales Com Customer Point Of Contact - ICSC/LCSC
		Payband Payband JG56 34XX 221X 221X SDWC 230X	JFC/ Payband JG56 34XX N 221X C 221X C 20WC S 230X C
11/9/2000		Function COSMOS / SWITCH Circuit Capacity Management Complex Resale Support Group Complex Resale Support Group LCSC	Function COSMOS / SWITCH Circuit Capacity Management Complex Resale Support Group Complex Resale Support Group LCSC

Central Office	ost	TELRIC \$370.5127
le Capacity in the	Nonrecurring Cost	Shared Cost \$0.0000 \$0.0000
Tennessee J.4.2 - Line Sharing Splitter - per Splitter System 24-Line Capacity in the Central Office	11/9/2000 N	Nonrecurring Cost Development Sheet Col H \$370.5127  Cost  Cost  Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor  Nonrecurring Economic Cost

Tennessee J.4.2 - Line Sharing Splitter - per Splitter System 24-Line Capacity in the Central Office

	H=D+G	Direct	\$144.6380 \$152.9400 \$23.0658 \$34.2839 \$15.5850		\$144.6380 \$152.9400 \$23.0858 \$34.2839 \$15.5850
	G=ExF	Discounted Disconnect Cost	\$0.000 \$0.000 \$0.000 \$0.000 \$0.000 Total	Discounted Discounsect	\$0.0000 \$0.0000 \$0.0000 \$0.0000 \$0.0000
	ш	Disconnect Discount Factor	1.1681 1.1681 1.1681 1.1681	Discount Discount Factor	1.1681 1.1681 1.1681 1.1681
	E=BXC	Disconnect Cost	\$0.0000 \$0.0000 \$0.0000 \$0.0000 \$0.0000	Disconnect	\$0.000 \$0.000 \$0.000 \$0.000 \$0.000
Proced in the Central Office	D=AvC	instail Cost	\$144,6380 \$152,9400 \$23,0658 \$34,2839 \$15,5850	Install Cost	\$144,6380 \$152,9400 \$23,0658 \$34,2839 \$15,5850
me capacity in	O	2 2 2	\$36.16 \$50.98 \$31.17 \$51.17 \$31.17	TELRIC Labor Rate	\$36.98 \$50.98 \$31.17 \$51.17 \$31.17
	œ	Disconnect Worktime	0.0000 0.0000 0.0000 0.0000	Disconnect Worktime	0.000 0.000 0.000 0.000 0.0000
	∢	Worktime	4,0000 3,0000 0,7000 0,5000	Installation Worktime	4.0000 3.0000 0.7400 0.5000
		JEC/Payband Description	Nlwk & Eng Planning (FG20) Complex Reaale Support Group (CRSG) Systems Designer w/Sales Com Customer Point Of Contact - ICSCALCSC	JFC/Payband Description	NMW & Eng Planning (FG20)  Complex Resale Support Group (CRSG) Systems Designer w/Sales Com  Customer Point Of Contact - ICSC/LCSC
		JFC/ Payband JG56	34XX 221X SDWC 230X	JFC/ Payband	34XX 221X SDWC 230X
11/9/2000	000761	Function COSMOS / SWITCH	Circuit Capacity Management Complex Resale Support Group Complex Resale Support Group LCSC	Function COSMOS / SWITCH	Circuit Capacity Management Complex Resale Support Group Complex Resale Support Group LCSC

in the Central Office (per LSOD)	Nonrecurring Cost	Shared Cost TELRIC \$0.0000 \$108.3297  \$0.0000 \$108.3297  X 1.0030  \$108.6561
J.4.6 - Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per LSOD)	11/9/2000	Nonrecurring Cost Development Sheet Col H \$108.3297  Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor  Nonrecurring Economic Cost

Tennessee J.4.6 - Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per LSOD)

H=D+G	Cost Cost	\$50.9800 \$23.0658 \$34.2839	RVP: BD	\$50.9800 \$23.0658 \$34.2839 108.3297
G=EXF	Discounted Disconnect Cost	\$0.0000 \$0.0000 \$0.0000	Discounted	\$0 0000 \$0 0000 \$0 0000 Total
L	Disconnect Discount Factor	1,1681 1,1681 1,1681	Discount Discount Eactor	1.1681
E=BxC	Disconnect Cost	\$0.0000 \$0.0000 \$0.0000	Disconnect	\$0.000 \$0.0000 \$0.0000
D=AxC	Install Cost	\$50.9800 \$23.0658 \$34.2839	Install Cost	\$50.9800 \$23.0658 \$34.2839
υ	Direct Labor Rate	\$50.98 \$31.17 \$51.17	TELRIC Labor Rate	\$50.98 \$31.17 \$51.17
æ	Disconnect	0.0000	Disconnect Worktime	0.0000
∢	Installation Worktime	0.7400	Installation Worktime	1.0000 0.7400 0.6700
	JFC/Payband Description NWW & Eng Planning (FG20)	Complex Resale Support Group (CRSG) Systems Designer w/Sales Com	JFC/Payband Description	Now a crig Training (FGZU) Complex Resale Support Group (CRSG) Systems Designer w/Sales Com
	Payband 34XX	221X SDWC	JFC/ Payband	221X SDWC
11/9/2000	Function Circuit Capacity Management	Complex Resale Support Group Complex Resale Support Group	Function Circuit Capacity Management	<u> </u>

Tennessee

14.7 - Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per occurrence of each group of 24 lines (48 pairs))  11/09/2000  11/09/2000  Nonrecurring Cost Development Sheet Col H \$54.2393 \$0.0000 \$54.2393 \$0.0000 \$54.2393 \$0.0000 \$54.2393 \$0.0000 \$54.2393 \$0.0000 \$54.2393 \$0.0000 \$54.2393 \$0.0000 \$54.0297 \$0.0000 \$54.027 \$0.0000 \$0.0
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Tennessee J.4.7 - Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per occurrence of each group of 24 lines (48 pairs))

H=D+G	Direct Cost	\$54.2393 <b>54.23925</b>	TELRIC \$54.2393 <b>54.2393</b>
G=ExF	Discounted Disconnect Cost	\$0.0000 Total	Discounted Discounted Cost \$0.0000 Total
ш	Disconnect Discount Factor	1.1681	Disconnect Discount Factor 1.1681
E=BxC	Disconnect Cost	\$0.000	Disconnect Cost \$0.0000
D=AxC	Install Cost	\$54.2393	Install Cost \$54.2393
U	Direct Labor Rate	\$36.16	TELRIC Labor Rate \$36.16
æ	Disconnect Worktime	0.0000	Disconnect Worktime 0.0000
۷	Installation Worktime	1.5000	Installation C Worktime 1.5000
	JFC/Payband Description	Job Grade 56	JFC/Payband Description Job Grade 56
	JFC/ Payband		JFC/ Payband JG56
11/09/2000	Function	COSMOS / SWITCH	Function COSMOS / SWITCH

Page 1

			TEL	\$15.5850	\$15.5850	\$15.6320	1.0000 \$15.6320
		Subsequent	Shared Cost	\$0.000	\$0.0000	, <sup>  </sup> ;	×
Tennessee J.4.8 - Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per order for J.4.7)	ing Cost		Direct Cost	\$15.5850	\$15.5850		
ssee illter in the Central Of	Nonrecurring Cost	***************************************	TELRIC	\$0.000	\$0.0000	\$0.0000	\$0.000
Tennessee		Initial	Shared Cost		\$0.0000 X	" ≻	< <sup>II</sup>
8 - Line Sharing - per (			Direct Cost		\$0.0000		
<b>4</b> .U	11/9/2000			Nonrecurring Cost Development Sheet Col H	l otal Cost Gross Receipts Tax Factor	Cost (including Gross Receipts Tax) Common Cost Factor	Nonrecurring Economic Cost

	Ð+Q <b>+</b> H	Direct Cost	2	00 15.5850		TELRIC	School and	\$15,5850	
			\$0.000	0.000		·	1	\$0.000	0.000
	0=5rf	Discounted Disconnect Cost	80.0000	Total		Discounted Disconnect Cost	Bubeequent	\$0,000	Total
	Ö	Decounted	\$0,000			Discounted		\$0.000	
	ii.	Discount Discount Factor	1.1681			Discount	Factor	1.1681	
	υ	7	\$0,000			ğ	Purbeequent	\$0.0000	
Det 104 -0.4.7)	E=BxC	Discoursed Cost	\$0.000			Dispormac		\$0.000	
	Ų	Pubeequery	\$15.5850			_	Pubeedueri	\$15.5850	
The comment of the control of the co	D=AuC	Patter Cost	000000\$		•	CORK		\$0.0000	
	υ	Direct Labor Rate	\$31,17			labor i	Mallo	\$31.17	
•			00000				0000	999	
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		홋	0.5000		Ę	1	0.5000	200-0	
	•	Morktimes Worktimes Fritial	00000		and affection	Worktimes	0000		
		JFC/Payband Description	CURROMER POINT OF CONTROL - ICSC/LCSC			JFC/ JFC/Payband Function Payband Description	Customer Point Of Contact - ICSC/LCSC		
		JFC/ Payband	Yncz			JFC/ Payband	230X		
	11/9/2000	Function				Function	CSC		

Tennessee

J.4.139 - Line Sharing Splitter - per Splitter System 96-Line Capacity in the Central Office - Disconnect	ystem 96-Line Ca	pacity in the Central Off	ice - Disconnect
11/9/2000		Nonrecurring Cost	
	Direct Cost	Shared Cost	TELRIC
Nonrecurring Cost Development Sheet Col H	\$348.3203	\$0.000	\$348 2202
Total Cost	\$348 3203	00000	\$0.500
Gross Receipts Tax Factor	\$0.000	0000.04	\$348.3203
Cost finchiding Grand Bassiats		≺ <sup>"</sup>	1.0030
Cost (meduality Gloss Receipts Lax)			\$349.3698
Commission Cost Factor		×	1.0000
Nonrecurring Economic Cost			\$349.3698

Page 2

#### Nonrecurring Cost Development

Tennessee J.4.199 - Line Sharing Spitter - per Spitter System 96-Line Capacity in the Central Office - Disconnect

	G=ExF H=D+G	Discounted Disconnect Cost	1.1681 \$84.4759 \$84.4759 1.1681 \$178.6494 \$178.6494 1.1681 \$26.9432 \$26.9432 1.1681 \$40.0471 \$40.0471	\$18.2049 Total	ct Discounted it Disconnect TELRIC	\$84,4759 \$178,6494 \$26,9432 \$40,0471 \$18,2049 Total
	L	Disconnect Discount Factor			Disconnect Discount Factor	1.1681 1.1681 1.1681 1.1681
Sconnect	E=B/C		\$72.3190 \$152.9400 \$23.0658 \$34.2839		- [	\$72.3190 \$152.9400 \$23.0658 \$34.2839 \$15.5850
ental Office - D	D=AxC	Install	\$0.0000 \$0.0000 \$0.0000	<b>8</b> 0.000	Install Cost	\$0.0000 \$0.0000 \$0.0000 \$0.0000 \$0.0000
capacity in the C	O	Direct Labor Rate	\$36.16 \$50.98 \$31.17 \$51.17	\$31.17	TELRIC Labor Rate	\$36.16 \$50.98 \$31.17 \$31.17
Cystein Sching Capacity if the Canadi Office - Disconnect	60	Disconnect Worktime	2.0000 3.0000 0.7400 0.6700	0.5000	Disconnect Worktime	2 0000 3 0000 0 7400 0 6700 0 5000
	∢	Installation	0000 0	0.000	Installation Worktime	0.0000 0.0000 0.0000 0.0000
		JFC/Payband Description	Ntwk & Eng Planning (FG20) Complex Resale Support Group (CRSG) Systems Designer w/Sales Com Cistomer Designer (Manage 1999)	Security of Children - ICSC/LCSC	JEC/Payband Description	Niwk & Eng Planning (FG20) Complex Resale Support Group (CRSG) Systems Designer w/Sales Com Customer Point Of Contact - ICSC/LCSC
		JFC/ Payband JG56	0)		JFC/ Payband	34XX 221X SDWC 230X
	11/9/2000	Function COSMOS / SWITCH	Circuit Capacity Management Complex Resale Support Group Complex Resale Support Group LCSC		Function COSMOS / SWITCH	gement oort Group oort Group

J.4.299 - Line Sharing Splitter - per Splitter System 24-Line Capacity in the Central Office - Disconnect Tennessee

		a partial office - Disconnect	Disconnect
11/9/2000		Nonrecurring Cost	
Nonrecurring Cost Development Sheet Col H  Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor	Direct Cost \$348.3203 \$348.3203	Shared  Cost \$0.0000 \$0.0000  X	\$348.3203 \$348.3203 1.0030 \$349.3698 1.0000
			<b>\$</b> 349.3698

Page 2

Tennessee J.4.299 - Line Sharing Splitter - per Splitter System 24-Line Capacity in the Central Office - Disconnect

	H=D+G	Direct	\$84.4759 \$178.6494 \$26.9432 \$40.0471 \$18.2049	8.3203263	\$178.6494 \$178.6494 \$26.9432 \$40.0471 \$18.2049
	G=EXF	Discounted Disconnect Cost	494 494 471 471		759 494 432 471 049
	ΙL	Disconnect Discount Factor	1.1681 1.1681 1.1681 1.1681	Disconnect Discount Factor	1.1681 1.1681 1.1681 1.1681
onnect	E=BxC	Disconnect	\$72.3190 \$152.9400 \$23.0658 \$34.2839 \$15.5850	Disconnect	\$72.3190 \$152.9400 \$23.0658 \$34.2839 \$15.5850
itral omce - Disc	D=AxC	install Cost	0000 0\$ 0000 0\$ 0000 0\$ 0000 0\$	install Cost	0000 0\$ 0000 0\$ 0000 0\$ 0000 0\$
ipacity in the Cer	O	Direct Labor Rate	\$36.16 \$50.98 \$31.17 \$51.17 \$31.17	TELRIC Labor Rate	\$36.16 \$50.98 \$31.17 \$51.17 \$31.17
resident of seein 44-Line Capacity in the Central Office - Disconnect	æ	Disconnect Worktime	2.0000 3.0000 0.7400 0.6700 0.5000	Disconnect Worktime	2.0000 3.0000 0.7400 0.5000
	∢	Installation Worktime	0000 0 0000 0 0000 0	Installation Worktime	0.0000 0.0000 0.0000 0.0000 0.0000
		JFC/Payband Description	Now & Englanding (FG20) Complex Resale Support Group (CRSG) Systems Designer w/Sales Com Customer Point Of Contact - ICSC/LCSC	JFC/Payband Description	Job Grade 56  Nwk & Eng Planning (FG20)  Complex Resale Support Group (CRSG)  Systems Designer w/Sales Com  Customer Point Of Contact - ICSC/LCSC
		JFC/ Payband	34XX 221X 221X SDWC 230X	JFC/ Payband	34XX 221X 221X SDWC 230X
	11/9/2000	Function COSMOS / SWITCH	Circuit Capacity Management Complex Resale Support Group Complex Resale Support Group LCSC	Function	Circuit Capacity Management Complex Resale Support Group Complex Resale Support Group LCSC

Tennessee J.4.699 - Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per LSOD) - Disconnect	Nonrecurring Cost	Development Sheet Col H         Cost Cost Cost SB1.8777         Cost Cost SB1.8777         TELRIC SB1.8777           x Factor Stor         \$81.8777         \$0.0000         \$81.8777           x Factor Stor         x 1.0030         \$82.1244           stor         x 1.0000         \$82.1244
J.4.699 - Line Sharing - per CLEC/	11/9/2000	Nonrecurring Cost Development Sheet Col H Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost

Page 2

#### Nonrecurring Cost Development

Tennessee J.4.699 - Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per LSOD) - Disconnect

	H=D+G	Direct	4.8874	0.0471	768146	\$14.8874 \$16.9432 \$40.0471 81.8777
	포				_	
	G=EXF	Discounted Disconnect Cost	\$14.8874	\$40.0471	Total	Discounted Discountect Cost \$14874 \$26,9432 \$40.0471 Total
	ш	Disconnect Discount Factor		1.1681		Disconnect Discount Factor 1,1681 1,1681
onnect	E=BxC	Disconnect	\$12.7450 \$23.0658	\$34,2839		Disconnect Cost \$12.7450 \$23.0658 \$34.2839
per Lacuty - Disc	D=AxC	Instail	\$0.000 \$0.0000	\$0.0000		Install Cost \$0.0000 \$0.0000 \$0.0000
	U	Direct Labor Rate	\$50.98 \$31.17	\$51.17		TELRIC Labor Rate \$50.98 \$31.17
Chines opinion in the Central Cinca (per LOCO) - Disconnect	æ	Disconnect Worktime	0.2500	0.6700		Disconnect Worktime 0.2500 0.7400 0.6700
	∢	installation Worktime	0.0000	0.0000		Worktime 0.0000 0.0000
				Systems Designer w/Sales Com		JFC/Payband Description Ntwk & Eng Planning (FG20) Complex Resale Support Group (CRSG) Systems Designer w/Sales Com
		JFC/ Payband	221X	SDWC		JFC/ Payband 34XX 221X SDWC
	11/9/2000	Function	Complex Resale Support Group	Complex Resale Support Group		Function Circuit Capacity Management Complex Resale Support Group Complex Resale Support Group

Tennessee

- Line Sharing - per Cl	LEC/DLEC Owned Splitter in the Central C group of 24 lines (48 pairs)) - Disconnect	Central Office (per occ sconnect	urrence of each
11/09/2000		Nonrecurring Cost	
Nonrecurring Cost Development Sheet Col H  Total Cost Gross Receipts Tax Factor Cost (including Gross Receipts Tax) Common Cost Factor Nonrecurring Economic Cost	Direct Cost \$10.5595 \$10.5595	Shared  Cost \$0.0000  \$0.0000  X  X	\$10.5595 \$10.5595 \$10.5595 1.0030 \$10.5913 1.0000

	9+Q=H	Direct	\$10.5595 10.55948603	TELRIC \$10.5595 10.5595
Disconnect	G=ExF	Discounted Disconnect Cost	\$10.5595 Total	Discounted Disconnect Cost \$10.5595 Total
nes (48 pairs)) - I	ш	Disconnect Discount Factor	1.1681	Disconnect Discount Factor 1.1681
ch group of 24 lli	E=BxC	Disconnect Cost	\$9.0399	Disconnect Cost \$9.0399
occurrence of ear	D=AxC	Install Cost	\$0.000	Install Cost \$0.0000
Tennessee ntral Office (per o	O	Direct Labor Rate	\$36.16	TELRIC Labor Rate \$36.16
Splitter in the Cei	80	Disconnect Worktime	0.2500	Disconnect Worktime 0.2500
EC/DLEC Owned	∢	Installation Worktime	0.0000	Installation Workline 0.0000
Tennessee J.4.799 - Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per occurrence of each group of 24 lines (48 pairs)) - Disconnect		JFC/Payband Description	Job Grade 50	JFC/Payband Description Job Grade 56
J.4.799 - Lin		JFC/ Payband		JEC/ JG56
	11/9/2000	Function		Function COSMOS / SWITCH

Tennessee J.4.899 - Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per order for J.4.7) - Disconnect

Nonrecurring Cost

11/9/2000

	1E1 BIC	\$18 2049	\$18.2049	1.0030	\$18.2597	1.0000	\$18.2597
Subsequent	Shared		\$0.000	*		×	
	Direct	\$18.2049	\$18.2049				
	TELRIC	\$0.000	\$0.0000	1.0030	\$0.0000	0000.1	*0.0000
Inittal	Shared Cost		20.0000 20.0000	<	*		
	Direct		\$0.000				
	Nonrecurring Cost Development Sheet Call	Total Cost	Gross Receipts Tax Factor	Cost (including Gross Receipts Tax)	Common Cost Factor	Nonrecurring Economic Cost	

Ternessee J.4.899 - Line Sharing - per CLEC/DLEC Owned Spitter in the Central Office (per order for J.4.7) - Discoursect

Direct Cost hittel Subsequent \$0,000 \$18,2049 0,0000 18,2049

HED+G

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Discount Discount Factor 1,1681

E=BxC Discorrect Cost

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Direct Leibor Rate \$31.17

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Worktimes
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11/9/2000

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Worktimes
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 JFC/Person

 Function
 Payband

 LCSC
 230X

 Customer Point Of Contact - ICSC/LCSC

BellSouth Telecommunications, Inc.

xDSL-Capable and Copper Loops

Index Study Date: 11/2000

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BellSouth Telecommunications, Inc.

xDSL-Capable and Copper Loops

Investments Study Date: 11/2000

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BellSouth Telecommunications, Inc.

xDSL-Capable and Copper Loops

Additives\_Recurring Study Date: 11/2000

Instructions:  1. Use this worksheet to record recurring non-labor expenses to be input into the Calculator calculations.  2. All amounts shown are per unit (e.g., per call, per loop, per MOU).  3. Input data, by Cost Element, leaving no blank lines. On next row after last line of data, type END in Cost Element Column.  4. All data on this form should be cell-referenced to study workpapers.
loop, per MOU). is. On next row olumn. study workpapers.
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Additives\_Nonrecurring Study Date: 11/2000

F G H			unit (e.g., per call, per loop, ner MOII)					ement has a single nonrecurring cost: use columns F & F for elements with a first	g cost; use columns G & H for elements with an initial and enhangement more	The subsequent nonlecturing cost.	<del>                                     </del>	19 Nonrecurring	Initial	S Amount S Amount											
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ers.  Volume Insensitive	A	8	ပ	٥	Ш	4	U	I
Instructions:  1. Use this worksheet to record recurring expensed labor times to be input Calculator calculations.  2. All amounts shown are per unit (e.g., per call, per loop, per MOU).  3. Input date, box externant, leaving no blank lines. On next row after last line of data, type END in Cost Element Column.  4. All data on this form should be cell-referenced to study workpapers.  5. Do NOT change columns, headings, sheet name.  Cost Labor Expense Description JFC/ Volume (Limited to 25 characters) Payband Sensitive (Limited to 25 characters)  END  RND  Maximum 20 entries per Cost Element #	- ~	CALCULAT	OR INPUT FORM - RECURRING LA	BOR EXPE	NSES DATA			
1. Use this worksheet to record recurring expensed labor times to be input Calculator calculations. 2. All amounts shown are per unit (e.g., per call, per loop, per MOU). 3. Input data, by Cost Element, leaving no blank lines. On next row after last line of data, type END in Cost Element Column. 4. All data on this form should be cell-referenced to study workpapers. 5. Do NOT change columns, headings, sheet name. Cost Labor Expense Description JFC/Volume Labor Expense Description Salate Element # (Limited to 25 characters) Payband Sensitive TND END Maximum 20 entries per Cost Element #	1 m	Instructions	: : :	:				
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-	-	0.0442		0.0058	0.407	0.4623	•	0 2125	0.6160	0.8500	0 3333	200			-	•	
	-					:			1			1 2440	6617	0.1133	1000	9/71	
٥	,																
4								-	1				1			!	
4		4N4X		4M1X	4AXX		4WXX	431X	137	¥LL#	411X	4AXX		431X	×11×	<	
Q		52 ENGINEERING		NGINEENING	52 CONNECT & TEST		SZ CONNECT & LEST	52 CONNECT & TEST	FOLL STOCKER	CINNECT & LEST	RAVEL	CONNECT & TEST		CONNECT & TEST	52 CONNECT & TEST		
ပ		52 E	-	370	52 C	10	250	52 C	: 6	37.	52 Ti	52 C		22 C	52 C	3	
60		A 14 1199		5	A 14 1199	277	2	A.14.1199	44.00	7	A.14.1199	A 14 1198	10000	A 14 1198	A 14 1198		ENO
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NSTALL   Description   NSTALL   Description   NSTALL   S-Wire Asymmetrical Digital Subscriber Line (ADSL) Compatible Loop (with Liktu)   Worktimes (Hrs.)   Worktim	¥	60	ပ	٥	ш		9	I	_	ſ	¥
NSTALL   NSTALL   A6 Months   (=INPUTS_MISCICG)   Northines (Hist)	1 Tennessee										
NSTALL   Description   Victorian   Description   Victorian   Description   Victorian   Description   Victorian   Description   Victorian   Description   Victorian   Description   Victorian   Description   Victorian   Description   Victorian   Description   Victorian   Description   Victorian   Description   Victorian   Description   Victorian   Description   Description   Victorian   Description   Victorian   Description   Victorian   Description   Victorian   Description   Description   Description   Victorian   Description	2 Nonrecuring Worktimes				!						
MSTALL   DISCONNECT   46 Months   C=INPUTS_MISCIC9    Worktimes (Min.)   Month LMU    DISCONNECT   46 Months   C=INPUTS_MISCIC9    Worktimes (Min.)   Month LMU    Months   C=INPUTS_MISCIC9    Worktimes (Min.)   Month LMU    Months   C=INPUTS_MISCIC9    Worktimes (Min.)   Month LMU    Mont	3 Study Period: 2000-2002										
NSTALL   SCONNECT   46 Months   46 Months   46 Months   46 Months   46 Months   46 Months   46 Months   46 Months   46 Months   46 Months   47   47   47   47   47   47   47   4					•						
DISCONNECT   46 Months   (=InPUTS_MISCLG9)   Worktimes (Min.)   Worktimes (Min.)   Worktimes (Hrs.)   Work	5 A.6.5	INSTALL		2-Wire Asymmetrical	Digital Subscrib	Ser Line (ADSL)	Compatible Lo	op (with LMU)			
Part   Part	6 A.6.599	DISCONNECT									
Percentage   Per		4	Months	(=INPUTS MISCIC9)							
First   Description   WS   First Install   Disconnect   First Install   Disconnect   First Install   Disconnect   First Install   Disconnect   First Install   Disconnect   First Install   Disconnect   First Install   Disconnect   Disconn	80	Į			-	(Min.)		!	Worktime	PS (Hrs.)	
SERVICE INQUIRY   SOWC   31.90   0.00   13.45   0.00   0.5317   0.000   0.2242			JFC / JG /		First		Addti				Addtl
SERVICE INQUIRY   SDWC   31.90   0.00   13.45   0.00   0.5317   0.0000   0.2242		Description	S/A	First Install	Disconnect	Addtl Install	Disconnect	First Install	First Disconnect		Disconnect
(E10*110+E10*110]*B\$)	10 Inputs_Service Inquiry, Row 15	SERVICE INQUIRY	SDWC	31.90	000	13.45	00:0	0.5317	00000	0.2242	00000
19+(E10*110}+E10*110]*B5) ENGINEERING JGS7 24.94 0.000 24.94 0.000 0.4156 0.0000 0.0455  1-2/17+(*E11*11)+	11 Inputs_Service Inquiry, Row 19	SERVICE INQUIRY	230X	45.00	90.06	10.00	10.00	0.7500	0.5000	0.1667	0.1667
(E10*110+E10*110]*B5)         ENGINEERING         JGS7         24 94         0.00         0.4156         0.000         0.4156           7/+(*E11*11)+(*E11*11)         ENGINEERING         4FXX         20.00         0.00         5.00         0.00         0.00         0.00           1/7*-11/1+(*E11*11)+(*E11*11)         ENGINEERING         4HX         2.40         0.00         0.00         0.00         0.00           1/7*-11/1+(*E11*11)+(*E11*11)+(*E11*11)         ENGINEERING         4MIX         2.40         0.35         0.040         0.00         0.0450           1/7*-11/1+(*E11*11)+(*E21*12)         CONNECT & TEST         4AXX         38.34         28.94         10.97         3.00         0.6390         0.0400           CONNECT & TEST         4WXX         2.00         0.00         0.00         0.00         0.00         0.00           CONNECT & TEST         4MIX         2.00         12.75         5.10         5.95         0.1700         0.000           CONNECT & TEST         4MIX         20.00         20.00         0.00         0.00         0.00         0.00           S         CONNECT & TEST         411X         20.00         20.00         0.00         0.00         0.00         0.00	Inputs_Engineering,				:						
17+(*E11*!1)+(E11*11)	12 (E8'18)+(E8'J8)+(E9'19)+(E9'J9)+((E10'110+E10'J10)'B5)	ENGINEERING	JG57	24.94	00:0	24.94	00:0	0.4156	0.0000	0.4156	0.0000
FORTINE FRING   AMX   495   265   270   0.40   0.0825   0.0442   0.0450	13 Inputs_Engineering (E7*17)+(E7*J7)+(*E11*111)+(E11*J11)	ENGINEERING	4FXX	20 00	000	2.00	000	0.3333	00000	0.0833	00000
17-117 +(E18-1)19 +(E20*12   CONNECT & TEST   4AXX   38.34   28.94   10.97   3.00   0.6390   0.0402   0.0400   0.0000	14 Inputs Engineering, Row 19 + 20	ENGINEERING	4N4×	4.95	2.65	2.70	0.40	0.0825	0.0442	0.0450	29000
	15 Inputs Engineering, Row 15		4M1X	2.40	0.35	2.40	0.35	0.0400	0.0058	00400	0.0058
CONNECT & TEST         4AXX         38.34         28.94         10.97         3.00         0.6390         0.4823         0.1828           CONNECT & TEST         4WXX         2 00         0 00         0 00         0 00333         0 0000         0 0000           CONNECT & TEST         431X         10.20         12.75         5.10         5.95         0.1700         0.2125         0.0850           CONNECT & TEST         431X         73.16         47.00         34.16         8.00         1.2193         0.7833         0.5693           TRAVEL         411X         20.00         20.00         0.00         0.3333         0.3333         0.3000	Inputs_Connect & Test, (E14*114)+(E15*115)+(E16*116)+(E17*J17)+(E18*J18)+(E20*12					!					
CONNECT & TEST 4WXX 2.00 0.00 0.00 0.00 0.0033 0.0000 0.00	16 0°L 20)+(E22°122°L22)+(E23°J23)+(E24°124)+(E25°125)	CONNECT & TEST	4AXX	38.34	28.94	10.97	3.00	0.6390	0.4823	0.1828	0.0500
sst Row 46         CONNECT & TEST         431X         10.20         12.75         5.10         5.95         0.1700         0.2125         0.0850           sst. Row 31-38         CONNECT & TEST         411X         73-16         47.00         34-16         8.00         12.193         0.7833         0.5693           7         TRAVEL         411X         20.00         20.00         0.00         0.00         0.3333         0.0000	17 Inputs Connect & Test, Row 42	CONNECT & TEST	4WXX	2.00	000	80	000	0.0333	00000	00000	00000
set. Row 31-38	18 Inputs Connect & Test, Row 46	CONNECT & TEST	431X	10.20	12.75	5.10	5.95	0.1700	0.2125	0.0850	0.0992
7 TRAVEL 411X 20.00 20.00 0.00 0.00 0.3333 0.3333 0.0000	Inputs Connect & Test, Row 31-38	CONNECT & TEST	411X	73.16	47.00	34.16	800	1.2193	0.7833	0.5693	0.1333
	o Inputs Travel, Row 7	TRAVEL	¥114	20.00	20.00	000	0.0	0.3333	0.3333	00000	00000
7	T.										
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Tennessee										
Nonrecurring Worktimes					:					
Study Period: 2000-2002					:					-
										1
A.6.598	TESTING		2-Wire Asymmetrical Digital Subscriber Line (ADSL) Compatible Loop (with LMU	Digital Subscrib	er Line (ADSL)	Compatible Lo	op (with LMU)			
Location Life		46 Months	(=INPUTS_MISCIC9)							!
				Worktimes (Min.)	Min.)			Worktimes (Hrs.	s (Hrs.)	
		JFC / JG /		First		Addtl				Addti
Source	Description	WS	First Install	Disconnect	Addti Install	Disconnect	First Install	First Install First Disconnect Addit Install	Addtl Install	Disconnect
Inputs_Connect & Test, Rows 20+22	CONNECT & TEST	4AXX	48.93	0.00	48.93	00:0	0.8156	0.0000	0.8156	0.0000
Inputs_Connect & Test, Row 46	CONNECT & TEST	431X	08.9	00.00	3.40	800	0.1133	0000	0.0567	00000
Inputs_Connect & Test, Rows 33+34+35+37	CONNECT & TEST	41X	45.10	0.00	45.10	000	0.7517	0.000	0.7517	0.000

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36 Tennessee										
37 Nonrecurring Worktimes										
38 Study Period: 2000-2002										
30										
40 A.6.6	INSTALL		2-Wire Asymmetrical Digital Subscriber Line (ADSL) Compatible Loop (without I	Digital Subscrib	er Line (ADSL)	Compatible Lo	op (without LA	.5	:	
41 A.6.699	DISCONNECT									
42 Location Life	!	46 Months	(=INPUTS_MISCIC9)		1					
43				Worktimes (Min.	Min.)			Worktimes (Hrs.	is (Hrs.)	
		JFC/JG/		First		Addti				Addti
44 Source	Description	WS	First Install	Disconnect	Addtl Install	Disconnect	First Install	First Disconnect	Addtl Install	Disconnect
45 Inputs_Service Order, Row (E7*17)	SERVICE ORDER	230X	1.05	1.05	1.05	1.05	0.0175	0.0175	0.0175	0.0175
Inputs_Enginearing, (E8*18*K8)+(E8*18*K8)+(E9*19*K9)+(E9*19*K9)										:
46 +((E10*110*K10+E10*J10*K10)*B5)	ENGINEERING	1657	2.49	000	2.49	0.00	0.0416	0.000	0.0416	0.000
Inputs_Engineering,										
47 (E/11/K/)+(E/3/K/)+(E11-111/K11)+(E11-311/K11)	ENGINEERING	¥ X	2.00	8	0.20	80	0.0333	00000	0.0083	00000
48 Inputs_Engineering, Row 19+20	ENGINEERING	4N4X	4.95	2.65	2.70	0.40	0.0825	0.0442	0.0450	0.0067
49 Inputs_Engineering, Row 15	ENGINEERING	4M1X	2.40	0.35	2.40	0.35	0.0400	0.0058	0.0400	0.0058
Inputs_Connect & Test, (E14*114)+(E15*115)+(E16*116)+(E17*J17)+(E18*J18)+(E20*12										
50 0°1.20)+(E22°122°1.22)+(E23°J23)+(E24°124)+(E25°125)	CONNECT & TEST	4 XX	38.34	28.94	10.97	3.00	0.6390	0.4823	0.1828	0.0500
51 Inputs Connect & Test, Row 42	CONNECT & TEST	4WXX	2.00	0.00	80	000	0.0333	0000	0000	00000
52 Inputs Connect & Test, Row 46	CONNECT & TEST	431X	10.20	12.75	5.10	5.95	0.1700	0.2125	0.0850	0.0992
53 Inputs Connect & Test, Row 31-38	CONNECT & TEST	411X	73.16	8.74	3.16 5	8.00	1.2193	0.7833	0.5693	0.1333
54 Inputs_Travel, Row 7	TRAVEL	41X	20.00	2000	0.00	0.00	0.3333	0.3333	0.000	0.0000
55										

Υ	В	ပ	D.	E	F	G	I	-	-	¥
5 Tennessee 7 Nonrecurring Worktimes 8 Study Derical 2000, 2002		1								
A6.698	TESTING		2-Wire Asymmetrical Digital Subscriber Line (ADSL) Compatible Loop (without LMU	Digital Subscrib	er Line (ADSL)	Compatible Lo	op (without LN	5		
Location Life	46	46 Months	(=INPUTS_MISCIC9)							
				Worktimes (Min.)	_			Worktimes (Hrs.	is (Hrs.)	
		JFC / JG /		First		Addti				Addti
Source	Description	WS	First Install	Disconnect	Addtl Install	Disconnect	First Install	First Disconnect   Addtl Install	Addtl Install	Disconnect
Inputs Connect & Test, Rows 20+22	CONNECT & TEST	4AXX	48.93	00:0	48.93	00:0	0.8156	0.000.0	0.8156	0.000
Inputs Connect & Test, Row 46	CONNECT & TEST	431X	989	000	3.40	000	0.1133	00000	0.0567	0.000
Inputs_Connect & Test, Rows 33+34+35+37	CONNECT & TEST	411X	45 10	00.0	45 10	000	0.7517	0.000	0.7517	0.000
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71	71 Tennessee										
72	72 Nonrecuring Worktimes										
73	73 Study Period: 2000-2002			:				!		:	•
74								!			
75	75 A.7.5	INSTALL	2	2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop (w/LMU)	Digital Subscrib	er Line (HDSL)	Compatible Loc	p (w/LMU)			
76	76 A.7.599	DISCONNECT									
77	77 Location Life		46 Months	(=INPUTS_MISCIC9)							
28					Worktimes (Min.)	Min.)			Worktimes (Hrs.	s (Hrs.)	
			JFC / JG /		First		Addti				Addti
g	Source	Description	WS	First Install	Disconnect	Addti Install	Disconnect	First Install	First Disconnect	Addti Instail	Disconnect
80	80 Inputs_Service Inquiry, Row 15	SERVICE INQUIRY	SDWC	31.90	00:00	13.45	00:0	0.5317	0.000	0.2242	0.000.0
19	81 Inputs Service Inquiry, Row 19	SERVICE INQUIRY	230X	45.00	30.00	10.00	10.00	0.7500	0.5000	0.1667	0.1667
	Inputs_Engineering,										
83	82 (E8*18)+(E8*J8)+(E9*19)+(E9*J9)+((E10*110+E10*J10)*B5)	ENGINEERING	JG57	24 94	000	24.94	000	0.4156	0.000	0.4156	0.000
83	83 Inputs_Engineering (E7*17)+(E11*111)+(E11*J11)	ENGINEERING	JG57	20:00	000	200	8	0.3333	00000	0.0833	00000
2	Inputs_Engineering, Row 19 + 20	ENGINEERING	4N4X	4.95	2.65	2.70	0.40	0.0825	0.0442	0.0450	0.0067
8	85 Inputs Engineering, Row 15	ENGINEERING	4M1X	2.40	0.35	2.40	0.35	0.0400	0.0058	0.0400	0.0058
	Inputs_Connect & Test,										,
	(E14"114)+(E15"115)+(E16"116)+(E17"J17)+(E18"J18)+(E21"12										,
88	86   1*L21) +(E22*122*L22)+(E23*J23)+(E24*124)+(E25*125)	CONNECT & TEST	¥XX	38.34	28.94	10.97	38	0.6390	0.4823	0.1828	00200
87	87 Inputs_Connect & Test, Row 42	CONNECT & TEST	4WXX	2.00	000	8	8	0.0333	0.0000	0000	0.000.0
88	88 Inputs_Connect & Test, Row 46	CONNECT & TEST	431X	10.20	12.75	5.10	5.95	0.1700	0.2125	0.0850	0.0992
8	89 Inputs_Connect & Test, Row 31-38	CONNECT & TEST	41.X	73.16	47.00	34.16	80	1.2193	0.7833	0.5693	0.1333
8	90 Inputs_Travel, Row 7	TRAVEL	41X	20.00	20.00	000	80	0.3333	0.3333	0000	0.000
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		-					(Hrs.)	7	0.0567
					!		Worktimes (Hrs.)	Connect	8
		1			-			Pirst Discon	
	]3							1.2406	0.1133
	9			Ompatible Loo		-	Addti	80	8 8
				or Line (HDSL) C			Addti Instali Disconnect	74.43	45.10
	ш			Ngital Subscribe		Worktimes (Min.)	포	8 8	0000
	٥			2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop furt ann	(=INPUTS_MISCIC9)		First Install	6.80	45.10
	U i	:		:	46 Months	JFC/JG/	WS 4AXX	431X	
8			TESTING		46	Description	CONNECT & TEST	CONNECT & TEST	
		1	!						-
			1 1				2	4+35+37	
	88	70		1		Source	Row 46	Kows 33+3	
2	ring Worklin	-000-C		ile I		Mart & Tool	med & Test	88 B	
93 Tennessee	94 Nonrecurring Worklimes 95 Study Perior 2000 2000	آوا	97 <b>A.7.598</b>	99 Location Life		102 Inputs Connect & Tool of	103 Inputs Connect & Test, Row 46		
-1	<u>ه ا ه</u>	ि	6 8	왕 호		<b>5</b>   5	5 5	ş	3

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₽	107 Tennessee								1		
흳	108 Nonrecurring Worktimes				!			-			
8	109 Study Period: 2000-2002			•						:	
110								-			
Ε	111A7.6	INSTALL		2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop (w/o LMU)	Digital Subscrib	er Line (HDSL)	Compatible Loc	b (w/o LMU)			
12	112A.7.699	DISCONNECT						1		!	
IΞ			46 Months	(=INPUTS_MISCIC9)						-	
Ιž					Worktimes (Min.	Min.)			Workthmes (Hrs.	8 (Hrs.)	
1		3	JFC / JG /	100	First	Addit install	Addti	First Install	First Disconnect   Addt Install	Addti Install	Addtl
≝۱	ezinos	Description of the state of the	2000	4.06	105	404	1 05	0.0175	0.0175	0.0175	0.0175
쁴	116 Inputs Service Order, Kow (E/11/)	SERVICE URDER	Y200	8	3	3	3		2		1
	Inputs_Engineering, (E8*18*k8)+(E8*18*K8)+(E9*19*K9)+(E9*19*K9)	1		•		ç	8	9440	800	9770	000
3	117 +((E10*110*K10+E10*J10*K10)*B5)	ENGINEERING	JG57	2.49	00:0	2.49	3	25	O COMMO	2	3300
138	Inputs_Engineering. 118 (E7+17*K7)+(E7-J7*K7)+(*E11*(111*K11)+(E11*J11*K11)	ENGINEERING		2.00	0.00	050	00	0.0333	00000	0.0083	0.0000
٤	finals Engineering Row 19+20	ENGINEERING	4N4X	4 95	2.65	2.70	0.40	0.0825	0.0442	0.0450	0.0067
18	12d Inputs Engineering, Row 15	ENGINEERING	4M1X	2.40	0.35	2.40	0.35	0.0400	0.0058	0.0400	0.0058
1 3	inputs_Connect & Test. (E1114)+(E1115)+(E10116)+(E17-117)+(E18-118)+(E21-12	CONNECTATEST	44 XX	7. 97.	28.94	10.97	300	0.6390	0.4823	0.1828	0.0500
4 8	Insure Copped & Tast Done 42	CONNECT & TEST	AWXX	200	000	80	80	0.0333	00000	00000	0.000
1	College Course Plant Day 48	CONNECT & TEST	XIX	50.00	12.75	5.10	5.95	0.1700	0.2125	0.0850	0.0992
4 3	toulouse Connect & Test Row 21.38	CONNECT & TEST	411X	73.16	47 00	34.16	8.8	1.2193	0.7833	0.5693	0.1333
1 2	125 Inputs Travel, Row 7	TRAVEL	¥11X	20.00	8	8	000	0.3333	0.3333	0.000	00000
ž									1		

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128 Termessee		,		ت ا	<u>"</u>	9	H	_	-	×
129 Nonrecurring Worktimes				:			:			
130 Study Period: 2000-2002							1		:	
!				1					:	
132 A.7.698	TESTING		2-Wire High Bit Rate Digital Subscriber Line (HDS1) Compatible Local (HDS1)	Digital Subscribes	Line (HDSI)	Compatible Loc	(IMI) of my or			
133							Composition of			
134 Location Life		46 Months	(=INPUTS_MISCIC9)							
155				Worktimes (Min.)	<u>e</u>			Worktimes (Hrs.	ya (Hra.)	
Source	Contract of the contract of th	JFC/JG/	i	First						Addti
137 lowite Copped From Days 24.00	Cascillation	EL .	First Install	Disconnect Addti Instali		Disconnect	First Install	First Install   First Disconnect   Addti Install	Addti Install	Disconnect
Thinking Counted a rest, Rows 21+22	CONNECT & TEST	<b>₩</b>	74.43	000	74.43	000	12406	00000	1 2406	00000
139 inputs Connect & 1881, Row 46	CONNECT & TEST	431X	6.80	800	340	800	0 1133	0000	0.0657	0000
139 inputs Connect & Test, Rows 33+34+35+37	CONNECT & TEST	4 717	45 10	2	45.40	5		8 6	2000	0.000
				3	2	3			75.17	٤

9)	S2 NA DUIRY DUIRY SUIRY ING	N N N N N N N N N N N N N N N N N N N	4-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop (wrLMU)	Worktimes (Min. First Disconnect Ad 30.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Addil Install 13.45 10.00 24.94 5.00 2.70 2.40	Compatible Lo  Addit  Disconnect  0.00  10.00  0.00  0.00  0.00  0.40  0.35	First Install 0.4156 0.3333 0.0625 0.0400	Worktines (Hr. Model 0.000 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0	Addti Install 0.2242 0.1667 0.4156 0.0450 0.0450	Addtl Disconnect 0.0000 0.1667 0.0000 0.0000 0.0007 0.0007	
156 Inputs	CONNECT & TEST CONNECT & TEST CONNECT & TEST CONNECT & TEST TRAVEL	4WXX 491X 431X 411X 411X	38.34 2.00 10.20 90.23 20.00	28 94 0.00 12.75 51.00 20.00	10.97 0.00 5.10 0.00	3.00 0.00 5.95 12.00	0.6390 0.0333 0.1700 1.5039 0.3333	0.4823 0.0000 0.2125 0.8500 0.3333	0.1828 0.0000 0.0850 0.8539 0.0000	0.0500 0.0000 0.0992 0.2000	

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161 lennessee			,	u	u.	O	I	-		
162 Nonrectimina Worktimes										×
South and a south and a south					1 1 1					
163 Study Period: 2000-2002										
3					:		:		i	
	_					1			- ^	
65 A.8.598	TECTION									
38			4-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop And Man	igital Subscribe	r Line (HDSL)	Compatible	1177 Vary 60		-	
							C MILES			
67 Location Life										
89	1	STIMONTIS	(=INPUTS_MISCIC11)						:	
		-		Workfilmes (Min.)	lin i					
		101/01			7			Worktimes (Hra.)	s (Hrs.)	
69		95.75		First		Addel			7	
2000	Description	SXX	Elect Inetail		_			_		Addri
70 inputs Connect & Test Rows 21+22			I Wat History	Disconnect	Addtl Install	Disconnect	First Inetall	First Install   Siret Discounses   Additional		
	CONNECT & TEST	4 ¥	11165	8	Τ				Addit Install	Disconnect
Inputs Collinea & Lest, Kow 46	CONNECT & TEST	A34X	900	3	8	300	1.8609	00000	1 8609	000
72 Inputs Connect & Test Rows 33+34+34+37	1000	?	360	00:0	3.40	000	0 1123	0000		3
	CONNECT & TEST	4 4 1 1	67.66	2	000		3	3300	0.0567	00000
			1	3	8	3	1.1276	00000	1 1276	0000
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To ronfeduming Worklimes		1		1						
177 Study Period: 2000-2002							1	111111		
100					: :		1	1 1 1 1 1 1		
				-						
	INSTALL									
180 A.8.699	THE CONTRICT OF	;	4-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop (w/n 1 Min	Digital Subscrib	er Line (HDSL)	Compatible Loc	CIMI O/M/ OC	1		
1811 Cation Life	COCONNEC							1	:	
	52	52 Months	(=INPLITS MISCICITY		1	1				
		;	7		-					
				Worktimes (Min.	Min.)			Worksimes (19-	1007	
183		196/24		Firet		1177		MORNING	rate.	
eginos - Company	Description	WS	First Install	Disconnect	Added because		i			Addti
Information (Code, Now (E7-17)	SERVICE ORDER	220.	106	The contract		Ulsconnect	First Install	First Disconnect	Addtl Install	Disconnect
Inputs_Engineering,			3	3	53	8	0.0175	0.0176	25.00	
(E8*18*K8)+(E8*J8*K8)+(E9*19*K9)+(E9*19*K9)									0.100	0.0175
1851+((E10*110*K10+F10*110*K10+BE)										
	ENGINEERING	1657	2.49	2						
Inputs_Engineering,		:		3.	2.43	30.0	0.0416	00000	0.0416	0.0000
188 (E717*K7)+(E7-J7*K7)+(*E11*111*K11)+(E11*J11*K11)	ENGINEEDING	3								
187 Inputs Engineering, Row 19+20	CHOINELAND	¥.	2.00	000	0.50	000	0.0333	200	0000	
188 Inputs Engineering Dow 45	CNOINEERING	A NAX	4.95	2.65	2.70			3	0.003	0000
	ENGINEERING	4M1X	240	0.36	2 5	2	0.0823	0.0442	0.0450	0.0067
Inputs_Connect & Test,			: : : : :	3	7.40	0.32	0040	0.0058	00400	0.0058
(E14*114)+(E15*115)+(E16*116)+(E17*J17)+(E18*J18)+(F21*12		_								2
189 1*M21) +(E22*122*M22)+(E23*J23)+(E24*124)+(F25*125)	TOUR PRODUCT						_	-		
190 Inputs Connect & Tast Row 42	CONNECT & LEST	¥ X	38.34	28.94	10.97	2	0000			
The Table of the Parish of the	CONNECT & TEST	4WXX	200	5		3	25.0	0.4823	0.1828	00000
The state of the s	CONNECT & TEST	431X	200	3	3	8	0.0333	0000	00000	200
192 Inputs Connect & Test, Row 31-38	CONNECT & TEST		10.20	12.75	5.10	5.95	0 1700	0.2125	0.000	300
193 Inputs Travel, Row 7	TOANG	¥114	90.23	51.00	51.23	12.00	5030	0.50	0000	0.0992
194)	IKAVEL	411X	808	20.00	000	2	2000	2000	U.8338	0.2000
						3	2000	0.3333	0000	0.000
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individual participation of the participation of th							I	_		,
197 Nonrecurring Worktimes	!	:		1						
198 Study Period: 2000-2002				-						
561					!			1		
200 A 8 608					1	1			;	
8	TESTING		4-Wire High Bit Rate Digital Subscriber Line (HDS) (Compatible Lone)	igital Subscriber	I ine (HDS) )	omnostikie i	10 to 10 to			
					1		(NMO FINE)	:		
Sud-Location Life		52 Months	(=!NPUTS MISCIC11)	!						
COZ		i	( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )		7					
		101101		Worktimes (Min.)	ii.			Worktimes (Hrs.	E (Hrs.)	
Source Source	-	196/196/		First		Addtl			-	
200 line de Connect & Tari Da Connection	Describtion	A.S	First Install	Disconnect	Addit tnatell	3	Clark franch			Addti
minute Comment of the Kows 21+22	CONNECT & TEST	4AXX	111 66	8		-	Liest install	rust install First Disconnect Addtl Install		Disconnect
200 Inputs_Connect & Test, Row 46	CONNECT & TEST		3	3	11.65	8	1.8609	00000	t	0000
207 Inputs Connect & Test Rows 33+34+35+37	CONTROL OF THE PARTY OF THE PAR	<u> </u>	98.9	8	3.40	000	0 1133	0000	2000	3000
800	COMMECT & LEST	41X	67.66	800	67.66	2		3	200	00000
					3	3	1.12/0	0000	1.1276	00000
602		-								

Addti Install Disconnect First Install Enst Disconnect Addti Install Disconnect First Install Disconnect Addti Install Disconnect Addit Install Di	Short (w/LMU)   Worktimes (Hrs.)   Worktimes (Hrs.)	80
Addtl Install         Disconnect Pirst Install         First Disconnect Addtl Install           13.45         0.00         0.5317         0.000         0.242           10.00         10.00         0.5317         0.000         0.1667           24.94         0.00         0.4156         0.000         0.4156           5.00         0.00         0.3333         0.0000         0.0436           2.40         0.35         0.0426         0.0450           2.40         0.35         0.0400         0.0426         0.0450           2.40         0.35         0.0400         0.0422         0.0450           2.40         0.35         0.0400         0.0423         0.0420           2.40         0.35         0.0400         0.0423         0.0450           2.40         0.35         0.0400         0.0423         0.0400           5.10         5.95         0.7170         0.2225         0.0659           24.16         8.00         1.2193         0.7833         0.0563           24.16         8.00         0.1700         0.5693         0.0669           24.16         8.00         0.1700         0.5693         0.0669           24.16	Addti İnstail         Addti İnstail         Worktimes (Hrs.)           Addti İnstail         D. Addti İnstail         First İnstail           13.45         0.00         0.5317         0.000         0.2242           10.00         0.00         0.7500         0.5000         0.1667           24.94         0.00         0.4156         0.0000         0.4156           5.00         0.00         0.3333         0.0000         0.4156           2.70         0.40         0.0825         0.0450         0.0450           2.70         0.40         0.0025         0.0450         0.0450           2.70         0.40         0.0025         0.0450         0.0450           2.70         0.40         0.0025         0.0450         0.0450           2.70         0.40         0.0025         0.0450         0.0450           2.70         0.40         0.0025         0.0450         0.0450           2.70         0.00         0.000         0.000         0.000           3.10         0.5990         0.1700         0.000           3.16         0.000         0.000         0.000           3.16         0.000         0.000         0.000 <th></th>	
Addit Install Disconnect First Install First Disconnect Addit Install 13.45 0.00 0.5317 0.000 0.2242 10.00 0.000 0.3317 0.0000 0.1667 0.2242 0.000 0.0333 0.0000 0.04156 0.0000 0.0333 0.0000 0.0422 0.0450 0.0000 0.0333 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.000	Addit Install Disconnect First Install First Disconnect Addit Install 13.45 0.00 0.53317 0.0000 0.2242 10.00 0.000 0.7550 0.5000 0.1667 24.94 0.00 0.04156 0.0000 0.4156 5.00 0.000 0.3333 0.0000 0.04156 0.0450 0.035 0.0400 0.035 0.0400 0.0058 0.0400 0.000	
Addti Instail Disconnect First Install First Disconnect Addti Install 13.45 0.00 0.5317 0.0000 0.2242 10.00 0.000 0.7500 0.5000 0.1667 24.94 0.00 0.0333 0.0000 0.4156 0.0000 0.4156 2.70 0.40 0.0000 0.3333 0.0000 0.0456 0.0400 0.035 0.0400 0.0058 0.0400 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.00	Addtl install         Disconnect         First Install         Worktimes (Hrs.)           13.45         0.00         0.5317         0.0000         0.2242           10.00         10.00         0.5317         0.0000         0.2242           24.94         0.00         0.7500         0.5000         0.1667           27.0         0.40         0.3333         0.0000         0.4156           27.0         0.40         0.0925         0.0460         0.0450           2.70         0.40         0.0925         0.0460         0.0460           2.70         0.40         0.0925         0.0460         0.0460           2.70         0.40         0.0925         0.0460         0.0460           2.40         0.35         0.0400         0.0400         0.0400           8.57         3.00         0.0590         0.4623         0.1428           0.00         0.00         0.0033         0.0000         0.0000           3.416         8.00         1.2193         0.7833         0.0000           0.00         0.00         0.3333         0.0000         0.0000	!
Addt Install         Addt1         Addt1         Worktimes (Hrs.)           Addt Install         Disconnect         First Install         First Disconnect         Addt1           13.45         0.00         0.5317         0.000         0.2242           10.00         0.7500         0.500         0.1667           24.94         0.00         0.4156         0.000         0.4156           5.00         0.00         0.3333         0.0000         0.4156           2.40         0.35         0.0400         0.0450         0.0450           2.40         0.35         0.0400         0.0450         0.0450           2.00         0.00         0.033         0.0400         0.0400           5.00         0.00         0.0333         0.0000         0.0400           5.10         0.00         0.0333         0.0000         0.0000           5.10         0.00         0.000         0.000         0.000           5.10         0.00         0.000         0.000           5.10         0.000         0.7700         0.5693           0.00         0.000         0.000         0.5693           0.000         0.000         0.000         0.00	Addt1 install         Disconnect         First Install         Worktimes (Hrs.)           13.45         0.00         0.5317         0.0000         0.2242           10.00         10.00         0.5317         0.0000         0.2242           24.94         0.00         0.7500         0.5000         0.1667           27.0         0.40         0.3333         0.0000         0.4156           27.0         0.40         0.0925         0.0442         0.0450           2.70         0.40         0.0925         0.0442         0.0450           2.40         0.35         0.0400         0.0460         0.0400           8.57         3.00         0.5990         0.4623         0.0400           5.10         5.05         0.0333         0.0000         0.0000           3.416         8.00         1.2193         0.7833         0.0000           0.00         0.00         0.3333         0.0000         0.0000	
Worktimes (Min.)         First         Worktimes (Hrs.)           First         Addti Install         Disconnect         First Disconnect         Addti Install           0.00         13.45         0.00         0.5317         0.000         0.2242           30.00         10.00         0.7500         0.500         0.1667           0.00         24.94         0.00         0.4156         0.000         0.4156           0.00         5.00         0.00         0.4156         0.000         0.0156           2.65         2.70         0.40         0.0333         0.0000         0.0450           2.894         8.57         3.00         0.5990         0.442         0.0450           0.00         0.00         0.033         0.0400         0.0450         0.0450           12.75         5.10         0.00         0.0333         0.0000         0.000           47.00         34.16         8.00         0.000         0.3333         0.0000           47.00         0.00         0.000         0.3333         0.0000         0.5693           20.00         0.00         0.000         0.3333         0.0000         0.0693           47.00         0.00	Worktimes (Min.)         Addti Install         Addti Install         Disconnect         Addti Install         Morktimes (Hts.)           0.00         13.45         0.00         0.5317         0.0000         0.2242           30.00         10.00         0.7500         0.5000         0.1667           0.00         24.94         0.00         0.7500         0.6000         0.4156           0.00         5.00         0.00         0.4156         0.0000         0.4156           0.00         5.00         0.00         0.3333         0.0000         0.4156           0.00         5.00         0.00         0.3333         0.0000         0.4156           0.00         5.00         0.00         0.042         0.0450         0.0450           2.65         2.70         0.40         0.0333         0.0422         0.0450           0.00         0.00         0.00         0.000         0.0400         0.0400         0.0400           12.75         3.00         0.000         0.000         0.000         0.000         0.000           47.00         34.16         8.00         0.000         0.000         0.000         0.000           47.00         0.00	DISCONNECT
Morktimes (Min.)         Addth         Addth         Morktimes (Hrs.)           First         Disconnect         Addth install         Disconnect         Addth install           0000         13.45         0.00         0.5317         0.000         0.2242           30.00         10.00         10.00         0.5307         0.000         0.1667           0.00         24.94         0.00         0.4156         0.000         0.4156           0.00         5.00         0.00         0.4333         0.0000         0.4156           2.65         2.70         0.00         0.4333         0.0000         0.0433           2.65         2.70         0.40         0.0826         0.0430         0.0430           2.894         8.57         3.00         0.5990         0.4423         0.1428           0.00         0.00         0.033         0.0000         0.0400         0.0000           12.75         5.10         0.00         0.000         0.000         0.000           12.75         5.10         0.00         0.000         0.000         0.000           12.75         5.10         0.00         0.000         0.000         0.000           20.00	Morktimes (Min.)         Addth         Addth         Morktimes (Hrs.)           Pirst         Addti Install         Disconnect         First Install         First Obsconnect           0.00         13.45         0.00         0.5317         0.000         0.2242           30.00         10.00         0.00         0.7500         0.500         0.1667           0.00         24.94         0.00         0.4156         0.000         0.4156           0.00         5.00         0.00         0.3333         0.0000         0.4156           0.00         5.00         0.00         0.4156         0.0420         0.0430           2.8 94         8.57         3.00         0.5990         0.4422         0.0400           1.2 75         5.10         0.00         0.0000         0.0000         0.0000           1.2 75         5.10         0.00         0.0000         0.0000         0.0000           1.2 75         5.10         0.00         0.0000         0.0000         0.0000           2.0 00         0.000         0.3333         0.0000         0.0000           1.2 193         0.7833         0.0000         0.0000           0.000         0.000         0.	46 Months
Pirst         Addtt Install         Disconnect Disconnect         Addtt Install         Addtt Install         Pirst In	Pirst         Addtt Install         Disconnect         Addtt Install         Disconnect Addtt Install         Print Install         Print Install         Print Install         Print Install         Print Install         Print Install         Print Install         Print Install         Addtt In	
Disconnect         Addti Install         Disconnect         First Install         First Disconnect         Addti Install           0.00         13.45         0.00         0.5317         0.0000         0.2242           30.00         10.00         0.0517         0.0000         0.1657           0.00         10.00         0.7500         0.5000         0.1667           0.00         5.00         0.000         0.4156         0.0000         0.1667           2.65         2.70         0.40         0.0425         0.0442         0.0450           2.65         2.70         0.40         0.0625         0.0442         0.0450           0.35         2.40         0.35         0.0400         0.0460         0.0460           0.00         0.00         0.00         0.00         0.0400         0.0460         0.0460           12.75         5.10         6.00         0.00         0.00         0.000         0.000           12.75         3.16         8.00         1.2136         0.5693         0.000           20.00         0.00         0.00         0.000         0.000         0.000           20.00         0.00         0.00         0.000         0.00	Disconnect         Addti Install         Disconnect         First Install         First Linstall         First Linstall         First Linstall         Addti Install           0.00         13.45         0.00         0.5317         0.0000         0.2342           30.00         10.00         0.050         0.500         0.1667           0.00         24.94         0.00         0.4156         0.000         0.4156           0.00         5.00         0.00         0.4156         0.000         0.4156           2.65         2.70         0.00         0.4156         0.000         0.4156           2.65         2.70         0.00         0.3333         0.0000         0.4156           2.65         2.70         0.40         0.0825         0.0440         0.0450           0.35         2.40         0.35         0.0400         0.0450         0.0450           0.00         0.00         0.00         0.000         0.0400         0.0400           12.75         5.10         0.00         0.000         0.000         0.000           0.00         0.00         0.000         0.000         0.000         0.000           0.00         0.000         0.000	<u> </u>
0.00         13.45         0.00         0.5317         0.0000         0.2242           30.00         10.00         0.7500         0.7500         0.2242           0.00         24.94         0.00         0.4156         0.0000         0.4156           0.00         5.00         0.00         0.0456         0.0000         0.4156           2.65         2.70         0.40         0.0825         0.0000         0.4156           0.35         2.40         0.35         0.0400         0.0400         0.0400           2.89         8.57         3.00         0.5990         0.4823         0.1428           0.00         0.00         0.0333         0.0000         0.0400           12.75         5.10         0.00         0.0333         0.0000           47.00         34.16         8.00         1.2125         0.0850           20.00         0.00         0.00         0.3333         0.7833         0.0050           0.00         0.00         0.3333         0.7833         0.0050	0.00         13.45         0.00         0.5317         0.0000         0.2242           0.00         24.94         0.00         0.7500         0.5000         0.1667           0.00         24.94         0.00         0.4156         0.0000         0.4156           0.00         5.00         0.00         0.3333         0.0000         0.4156           2.65         2.70         0.40         0.0025         0.0432         0.0450           0.35         2.40         0.35         0.0400         0.0459         0.0450           2.894         8.57         3.00         0.5990         0.4823         0.0400           0.00         0.00         0.0333         0.0000         0.0000         0.0000           12.75         5.10         5.95         0.1700         0.2125         0.0850           47.00         34.16         8.00         0.000         0.3333         0.0000         0.0000           0.00         0.00         0.000         0.3333         0.0000         0.0000	SERVICE INDITIES COMO
30.00         10.00         10.00         0.7500         0.5000         0.1667           0.00         24.94         0.00         0.4156         0.0000         0.4156           0.00         5.00         0.00         0.40         0.0025         0.0450         0.0450           0.05         2.70         0.40         0.0025         0.0460         0.0450         0.0450           0.35         2.40         0.35         0.0400         0.0058         0.0460         0.0460           2.894         8.57         3.00         0.5990         0.4823         0.1428           0.00         0.00         0.00         0.000         0.000         0.000           12.75         5.10         5.95         0.1700         0.2593         0.1428           20.00         0.00         0.00         0.000         0.000         0.000           47.00         0.00         0.00         0.000         0.000         0.000           20.00         0.00         0.00         0.000         0.000         0.000           20.00         0.00         0.00         0.000         0.000         0.000           20.00         0.00         0.000         0.000<	30.00         10.00         10.00         0.7500         0.5000         0.1667           0.00         24.94         0.00         0.4156         0.0000         0.1667           0.00         5.00         0.00         0.3333         0.0000         0.4156           2.65         2.70         0.40         0.0825         0.0442         0.0833           0.35         2.40         0.35         0.0400         0.0460         0.0460           2.894         8.57         3.00         0.5990         0.4023         0.1428           0.00         0.00         0.00         0.0333         0.0000         0.0000           12.75         5.10         5.95         0.1700         0.2125         0.0859           47.00         34.16         8.00         1.2193         0.7833         0.0859           20.00         0.00         0.00         0.33333         0.0859         0.0859	SERVICE INCLUDY
0.00         24.94         0.00         0.4156         0.0000         0.4156           0.00         5.00         0.00         0.0052         0.0000         0.4156           2.65         2.70         0.40         0.002         0.0422         0.0450           0.35         2.40         0.35         0.0400         0.0460         0.0460           2.8 94         8.57         3.00         0.5990         0.4823         0.1428           0.00         0.00         0.00         0.000         0.000         0.000           12.75         5.10         5.10         0.000         0.000           47.00         0.00         0.000         0.1700         0.2593           20.00         0.00         0.00         0.003         0.0000           0.00         0.00         0.000         0.000           0.00         0.00         0.000         0.000           0.00         0.00         0.000         0.000           0.00         0.00         0.000         0.000	0.00         24.94         0.00         0.4156         0.0000         0.4156           0.00         5.00         0.00         0.3333         0.0000         0.4156           2.65         2.70         0.40         0.0025         0.0442         0.0633           0.35         2.40         0.35         0.0400         0.0450         0.0450           0.09         0.09         0.0400         0.0038         0.0400         0.0400           12.75         5.00         0.00         0.000         0.0000         0.0000           12.75         5.95         0.1700         0.2125         0.0850           47.00         3.416         8.00         1.2193         0.7833         0.5693           20.00         0.00         0.00         0.3333         0.0000	-
0.00         54.94         0.00         0.4156         0.0000         0.4156           2.65         2.70         0.00         0.3333         0.0000         0.0833           2.65         2.70         0.40         0.0025         0.0450         0.0450           0.35         2.40         0.35         0.0040         0.0450         0.0450           2.8.94         8.57         3.00         0.5990         0.4823         0.1428           0.00         0.00         0.00         0.000         0.000         0.000           12.75         5.10         5.95         0.1700         0.2833         0.0850           47.00         0.00         0.00         0.000         0.3333         0.3333         0.0563	0.00         54.94         0.00         0.4156         0.0000         0.4156           2.65         2.70         0.40         0.0333         0.0000         0.0833           2.65         2.70         0.40         0.0925         0.0442         0.0450           0.35         2.40         0.35         0.0400         0.0450         0.0450           0.00         0.00         0.00         0.000         0.000         0.000           12.75         5.10         5.95         0.7700         0.2125         0.0850           47.00         3.416         8.00         1.2193         0.7333         0.5693           20.00         0.00         0.00         0.3333         0.5693	ENGINEERING JG57
2.65 2.70 0.40 0.0333 0.0000 0.0833 0.0000 0.0833 0.0000 0.0833 0.0000 0.0833 0.0000 0.0833 0.0000 0.0833 0.0000 0.0833 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	2.65         2.00         0.0333         0.0000         0.0833           0.35         2.40         0.35         0.0402         0.0452         0.0450           0.35         2.40         0.35         0.0400         0.0450         0.0450           0.00         0.00         0.00         0.0000         0.0400         0.0400           12.75         5.00         0.00         0.0000         0.0000         0.0000           12.70         0.00         0.00         0.1700         0.2125         0.0850           47.00         0.00         0.00         0.000         0.000         0.000           0.00         0.00         0.000         0.3333         0.5693	ENGINEERING JG57
28.94 8.57 3.00 0.5990 0.4823 0.0429 0.0450  0.00 0.00 0.00 0.00 0.000 0.0000 0.0000  12.75 5.10 0.00 0.00 0.000 0.000  47.00 0.00 0.00 0.000 0.000  20.00 0.00 0.	28 94 8 57 3.00 0.5990 0.4823 0.0000 0.00 0.00 0.000 0.0000 0.128 47.00 0.00 0.00 0.000 0.3333 0.5693 20.00 0.00 0.00 0.3333 0.5693	ENGINEERING 4N4X
28.94         8.57         3.00         0.5990         0.4823         0.0400           28.94         8.57         3.00         0.5990         0.4823         0.1428           0.00         0.00         0.00         0.0333         0.0000         0.0000           12.75         5.10         5.95         0.1700         0.2125         0.0850           47.00         34.16         8.00         1.2193         0.5433         0.5593           20.00         0.00         0.00         0.3333         0.3333         0.0000	28.94         8.57         3.00         0.5990         0.4623         0.0400           28.94         8.57         3.00         0.5990         0.4623         0.1429           0.00         0.00         0.00         0.0033         0.0000         0.0000           12.75         5.10         5.95         0.1700         0.2125         0.0850           47.00         34.16         8.00         1.2193         0.7833         0.5693           20.00         0.00         0.00         0.3333         0.0000	ENGINEERING 4M1X
28 94 8 57 3.00 0.5990 0.4823 0.1428 0.00 0.00 0.00 0.0333 0.4823 0.1428 12.75 5.10 5.95 0.1700 0.2125 0.0850 47.00 34.16 8.00 1.2193 0.6850 20.00 0.00 0.3333 0.3333 0.0000	28 94         8 57         3.00         0.5990         0.4823         0.1428           0.00         0.00         0.00         0.00         0.000         0.000           12.75         5.10         5.95         0.1700         0.2125         0.0650           47.00         34.16         8.00         1.2193         0.7833         0.5693           20.00         0.00         0.00         0.3333         0.3333         0.0000	-
28 94         8 57         3.00         0.5990         0.4823         0.1428           0.00         0.00         0.00         0.0333         0.0000         0.0000           12.75         5.10         5.95         0.1700         0.2125         0.0850           47.00         34.16         8.00         1.2193         0.5593         0.5593           20.00         0.00         0.00         0.3333         0.3333         0.0093	28 94         8.57         3.00         0.5990         0.4823         0.1428           0.00         0.00         0.00         0.00         0.000         0.000           12.75         5.10         5.95         0.1700         0.2125         0.0650           47.00         34.16         8.00         1.2193         0.7833         0.5693           20.00         0.00         0.00         0.3333         0.3333         0.0000	
0.00         0.00         0.00         0.000         0.1428           12.75         5.10         5.95         0.1700         0.000           47.00         34.16         8.00         1.2193         0.0850           20.00         0.00         0.3333         0.3593         0.05593	200         6.57         3.00         0.5990         0.4823         0.1428           0.00         0.00         0.00         0.00         0.000         0.000           12.75         5.10         5.95         0.1700         0.2125         0.0650           47.00         34.16         8.09         1.2192         0.7833         0.5693           20.00         0.00         0.3333         0.3333         0.0000	
12.75 5.10 5.00 0.0333 0.0000 0.0000 47.00 34.16 8.00 1.2193 0.2833 0.5693 20.00 0.00 0.00 0.3333 0.3333 0.0000	12.75 5.10 5.95 0.1700 0.2125 0.0850 47.00 34.16 8.00 1.2193 0.7333 0.5693 20.00 0.00 0.00 0.3333 0.0000	
47.00         34.16         8.00         1.2193         0.7783         0.0850           20.00         0.00         0.00         0.3333         0.3333         0.0000	47.00 34.16 8.00 1.7193 0.7125 0.0850 20.00 0.00 0.00 0.3333 0.5693 0.0000	_
20.00 0.00 0.00 0.3333 0.35633 0.0000000000000000000000000000000000	20.00 0.00 0.00 0.3333 0.3693 0.0000	CONNECT & TEST 411X
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33 Nonrecurring Worktimes		1	:							
34 Shirly Pariod 2000, 2002						:			: :	
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A.13 808		:	1							
	TESTING		2-Wire Copper Loop - Short (w/LMU)	Short (w/LMU)						
Sil collection								:		
STOCKED LINE	46	46 Months	(=INPUTS_MISCIC9)			+				
				Worktimes (Min.	all Cult			1	T	:
		JFC / JG /						WORKIIMOS (Hrs.	S (Hrs.)	
Source	Description	WS	First Install	Discoopert	Aridel bressil	Addti	:			Addti
Imputs Connect & Test, Rows 20+22	CONNECT & TEST	AAXX	10.50			Maconnect	rirst Install	First Install   First Disconnect   Addtl Install	Addti Install	Disconnect
Zinputs_Connect & Test, Row 46	CONNECT & TEST	4318	8C 04	000	48.59	800	0.8099	0.000	0.8099	00000
13 Inputs_Connect & Test, Rows 33+34+35+37	CONNECT & TEST	411X	0.00	8 8	3.40	8	0.1133	00000	0.0567	00000
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247 Tennessee						٥	Ξ	-	7	¥
248 Nonrecurring Worktimes		,	1			:				
249 Study Period: 2000-2002			:							
250		!				!				
251 A.13.9	INSTALL		2 Wire Council	1		1				
252 A.13.999	DISCONNECT	:	T-AAII & CODDet Food - Suot (M/O FIND	- Short (w/o LIMIL	:					
253 Location Life	: '	46 Months	(=INPUTS_MISCIC9)							
507				Worktimes (Min.	Min.)				1	
		JFC / JG /		الم		A 44.401		WOLKINGS (TIE.	Wa (rife.)	
255 Source	Description	WS	First Install	Disconnect	Addti Instali	Disconnect	First Install			Addti
256 Inputs_Service Order, Row (E7*17)	SERVICE ORDER	230X	105	20.5	1 05	30,	11361119611	LIE DISCONDECT	₹	Disconnect
Inputs_Engineering.				3	3	3	CVEOO	0.0175	0.0175	0.0175
(E8'18'K8)+(E8'J8'K8)+(E9'19'K9)+(E9'J9'K9)										,
257 +((E10"110"K10+E10")10"K10)"B5)	ENGINEERING	JG57	2.49	00.0	249	8	9770	00000		
Inputs_Engineering.					: ! !	3	5	0000	5	00000
258(E7*17*K7)+(E7*J7*K7)+(*E11*111*K11)+(E11*J11*K11)	ENGINEERING	4FXX	2.00	8	Ş	8	0000			
259 Inputs Engineering, Row 19+20	ENGINEERING	4N4×	4 05	3,65	3 6	3 5	0.0333	0000	0.0083	0000
260 Inputs Engineering, Row 15	FNGINEEDING	×1747	200	20.7	2.7	<b>⊕</b>	0.0825	0.0442	0.0450	0.0067
Inputs Connect & Test,		Ç.	0.40	CS.D	2.40	0.35	0.0400	0.0058	0.0400	0.0058
(E14*114)+(E15*115)+(E16*116)+(E18*J18)+(E19*119*L19)+(E2										
<u>261</u> 2*122*L22)+(E24*124)+(E25*125)	CONNECT & TEST	4AXX	35.94	28 67	8 57	8	0003			
262 Inputs_Connect & Test, Row 42	CONNECT & TEST	4WXX	200	2	500	3 8	08600	0.4823	0.1428	0.0500
26 Inputs Connect & Test, Row 46	CONNECT & TEST	431X	ç		3 !	3	0.0333	9900	0000	0000
264 Inputs Connect & Test. Row 31-38	TOUR TOUR	2	0701	12.73	2	5.95	0.1700	0.2125	0.0850	0.0992
265 Inputs Travel Row 7	TOTAL OF IEST	¥ :	/3.16	47.00	¥.	88	1.2193	0.7833	0.5693	0.1333
998	- KAVEL	411X	800	20:00	00.0	80	0.3333	0.3333	00000	0000
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268 Tennessee	,	ر	٥							
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269 Nonrecurring Worklimes		_								¥
270 Shidy Period: Soon Soon					-					
2007-0007 COURT 1000					:					
27.7 A 12.000		•			;			i		_
277	TESTING		2-Wire Copper Loop Short (11)	Chort Charles	-+					
š <b>i</b>		-	- don't leddon a	Short (WO LIMIU)	_			-		
274 Location Life		-			!			1		
275		46 Months	(=INPUTS MISCIC9)	!				-		
320					7					
Source Source	Description			Worktimes (Min.)	<b>(i</b> ii)	_				
277 Innute Consert & Tack Dame 40:00	nesculpuoi	S.	First Install	Disconnect	Addit batail Direct	1		WORKIIMOS (Hrs.)	S (HIS.)	_
77+61 SMON TO THE TOTAL TOTAL	CONNECT & TEST	AAAA	25.67		110101111111111111111111111111111111111	CHROOPEC	First Install	First Install First Disconnect Addit Install	Addit Inetall	Diegona
278 Inputs_Connect & Test, Row 46	TOTA TOTAL	<b>§</b>	46.09	000	48.59	000	0.8000	0000		Ciacomiec
279 Inputs Connect & Test Down 224.25.37	COMMECT & LEST	431X	08'9	000	3.40			3300	66080	0000
280	CONNECT & TEST	411X	45.10	200	45.40	3 8	321.0	0000	0.0567	0.000
8				3	2	3	0.7517	0000	0.7517	00000
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282 Tennessee		اد	۵	w		١	,			
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283 Nonrecuring Worktimes	: : : : : : : : : : : : : : : : : : : :			:						
284 Study Period: 2000, 2002		-								
500	:				:				-	
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286 A.14.8	INCTAIL	-							!	
287A.14.899			4-Wire Copper Loop - Short (w/LMU	- Short (w/LMU)					:	
380 00000	MSCONNECT						1			
289		52 Months	(=INPUTS_MISCIC11)				-			
				Worktimes (Min.	Min.)	-			1	_
		JFC/JG/		1				Worktimes (Hrs.	S (Hrs.)	
Source	Description	×	First Inches			Addt				Addil
291 Inputs Service Inquiry, Row 15	SEDVICE MOUNT			Usconnect	Addtl Install	Disconnect	First Install	First Disconnect	Addtl Install	Disconne
292 Inputs Service Inquiry Row 19	שליים שליים	SOWC.	3190	000	13.45	000	0 5317	0000		Tale College
Inche Englanding	SERVICE INCURY	230X	45.00	30.00	10.00	1000	200	300.0	0.2242	00000
'Sull paralle and the sull par	_				3	3	36	0.2000	0.1667	0.1667
233(E8-18)+(E8-18)+(E9-19)+(E9-19)+((E10-110+E10-110)-B5)	ENGINEERING	1657	24.04	6						
294 Inputs Engineering (E7*17)+(E7*J7)+(*E11*111)+(E11*J11)	FNGINEEDING	200		3	24.94	8	0.4156	00000	0.4156	0000
295 Inputs Engineering, Row 19 + 20	CALCULATION	ò	20.02	80	2.00	000	0.3333	0000	0.0023	0000
296 Inputs Engineering Row 15	LINGINGERAING	474 X	4.95	2.65	2.70	640	0.0825	0.0443	2000	0.000
Incuts Connect & Tool	ENGINEERING	4M1X	2.40	0.35	240	35	0000	7640	200	0.0067
(E14*114)+(E15*115)+(F16*116)+(E18*118)+(E10*110******					: :	3	3	8000	0.0400	0.0058
297+(F22*122*M22)*(E34*124)*(E35*13 M18)										
000 000	CONNECT & TEST	4AXX	35.94	28 94	8 57	8	-			
Inputs Collined & Lest, How 42	CONNECT & TEST	4WXX	500	5.8	2	3	0.2990	0.4823	0.1428	0.0500
299 Inputs_Connect & Test, Row 46	CONNECT & TEST	75.0	33.4	3	8	8	0.0333	0000	0000	0000
00 Inputs Connect & Test Row 21.38	10 10 10 10 10 10 10 10 10 10 10 10 10 1	<u> </u>	10.20	12.75	5.10	5.95	0 1700	2010	000	300
Office Trains Dam 4	CONNECT & TEST	41×	90.23	51.00	51.22	2	3 6	C7170	0.00	0.0992
minus II and I LOW /	TRAVEL	411X	200	5	3	3	250	0.8500	0.8539	0 2000
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29 Nonrecurring Worktimes					1					
M Study Daniel 2000 2002										
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A 14 808										-
	TESTING		4-Wire Copper Loop - Short (w/l MII)	Short (will Mill)	:		-			
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	1 1 1 1	K2 Manufac				1				
		MOREIS	(=INPO S MISCICI1)		-			:		
3				Worktimes (Min.)	lin.)			7	T	
eginge	Description	S	Elved Install					WORKUMES (Hrs.)	(Hrs.)	
3 Inputs Connect & Test Rows 19+22	1000		IIPICIII YOU .	Disconnect	Disconnect Addit Install Disconnect	Disconnect	First Install	First Install   First Disconnect   Addit Install		Dieconnood
Allowing Copped Tree Co. 40	CONNECT & LEST	ğ	72.89	000	72.89	8	1 2440	0000		The country of
Timbus Current & I Half Ado	CONNECT & TEST	431X	8		1	3	2617	3	1.2149	0000
Simputs Connect & Test Rowe 33+34+35+37		2	3	800	3.40	800	0.1133	00000	0.0567	
10.00	CONNECT & TEST	41X	99.29	000	67.66	2	4 4 3 76	3000	7000	333
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318 Tennessee	Pessee			,		F	S	I		-	ļ
319 Nonr	319 Nonrecurring Worktimes		:		· · · · · · · · · · · · · · · · · · ·						
320 Study	320 Study Period: 2000-2002	1		:				1			
33				:							
322 A. 14.9	The second of th	METALL	1	:			:			-	
323 A.14.999	666	DISCONNECT	:	4-Wire Copper Loop - Short (w/o LMU	- Short (w/o LML	•					
22. Location Life	tion Life		52 Months	(=) MISCICLE			: : : : : : : : : : : : : : : : : : : :				
					Vontimes (Min.	MID.)			Worktimes (Hrs.	68 (Hrs.)	
326	Source	Description	JFC/JG/ WS	First Install	First		Addti	_			Addti
327 Inputs	327 Inputs_Service Order, Row (E7*17)	SEBVICE ODDED	305				Usconnect	First Install	First Disconnect	Addtl Install	Disconnect
Inputs	Inputs_Engineering,	פרייאוכב סעסנא	X367	1.05	1.05	52	1.05	0.0175	0.0175	0.0175	0.0175
(E8.16	(E8'18'K8)+(E8'J8'K8)+(E9'19'K9)+(E9'J9'K9)										
33 E	328 +((E10*110*K10+E10*J10*K10)*B5)	ENGINEERING	JG57	2.49	8	,				_	
Inputs	Inputs_Engineering,		1		3	64.7	3	0.0416	00000	0.0416	0.000
329 (E7*1)	329(E7*17*K7)+(E7*J7*K7)+(*E11*111*K11)+(E11*J11*K11)	ENGINEERING	AFYY	8							
330 Inputs	5 Engineering, Row 19+20	ENGINEERING	ANAX	90.7	900	99	8	0.0333	0.000	0.0083	00000
331 Inputs	331 Inputs Engineering, Row 15	FNGINEERING	À 1	S. C.	565	2.70	040	0.0825	0.0442	0.0450	0.0067
ş	Insule Copped & Tool		Y I		0.35	2.40	0.35	0.0400	0.0058	0.0400	0.0058
(E14*)	(E14*114)+(E15*115)+(E16*116)+(E18*J18)+(E19*119*M19)										
332 +(E22	332 +(E22*122*M22)+(E24*124)+(E25*125)	CONNECT & TEST	44XX	36.04		-					_
333 Inputs	333 Inputs Connect & Test, Row 42	CONNECT & TEST	4WXX	5 6	<b>3</b> . 2	8.57	3.00	0.5990	0.4823	0.1428	0.0500
334 Inputs	334 Inputs Connect & Test, Row 46	CONNECT & TEST	431X	80.00	300	80	000	0.0333	00000	00000	00000
335 Inputs	335 Inputs Connect & Test, Row 31-38	CONNECT & TEST	4118	200	12.03	5 10	5.95	0.1700	0.2125	0.0850	0 0992
336 Inputs	338 Inputs Travel, Row 7	TRAVE	- X14X	3 3	3	51.23	12.00	1.5039	0.8500	0.8539	0.000
337			<u> </u>	M.02	8.8	000	000	0.3333	0.3333	00000	0000
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				DET ON TOTAL	_					
Location Life					_					
	- 22	52 Months	TO COURT OF INCIDENT						_	
	1	2	(ILDIDOIM CIDLAII-)							
				Workstein and Maria	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	:				
				NOIN LINES (	Min.)			Workimes (Mrs.)	o (Mrs.)	
		JFC/JG/		Elme				PARTIE DAY	3 (mis.)	
Source	Total Property		1	1811		Addi				Adde
	Describillon	28	First Install	Disconnect	Additional	1		;		
Inputs Connect & Test, Rows 19+22	TOTAL TOTAL					DISCOULECT	First Install	First Instail   First Disconnect   Addit Install	Addt/ Install	Disconnect
	COMPLETE	¥	72.89	8	72 80	80				1000000
Inputs Connect & Test, Row 46	1000			3	20.7	3	1.2149	00000	1.2149	00000
	CONNECT & TEST	431X	680	5	,					
Inputs_Connect & Test, Rows 33+34+35+17	TOTAL TOTAL	1		3	9	3	0133	0000	0.0567	0000
	CONNECT & LEST	411X	67.66	2	01.00		+	111111111111111111111111111111111111111	3	333
		1		3	8	8	1.1276	00000	1 1276	0000
The second secon			_				1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		3
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9 Worktimes 1: 2000-2002 2: 2000-2002 2 Source			U								
NSTALL   NSTALL   Disconnect   A	JOST I BRINGSSEE						9	-	-		
INSTALL   DISCONNECT   46 Months   First   Long (WILMIU)   Monthlines (Min.)   Month	Onfecuming Worklimes		1							٦	¥
INSTALL   INSTALL   Log   Long (WILM!)   Log   Long (WILM!)   Log   Long (WILM!)   Log   Long (WILM!)   Log   Long (WILM!)   Log   Long (WILM!)   Log   Long (WILM!)   Log   Long (WILM!)   Log   Long (WILM!)   Log	Ide Dated 2000 2000										
Convert at East   Convert at	LOY FORIOU. 2000-2002	-			1		:				
NSTALL   DISCONNECT   46 Months   C=INPUTS_MISCIGO    Monthtness (Min.)   Monthlines			1								
PISCONNECT   Convect   C	13.10	T. C. C. C. C. C. C. C. C. C. C. C. C. C.									
Connect at Test         Advitement of Months         (=INPUTS_MISCLS9]         Workthmes (Min.)         Monthmes (Min.)         Workthmes (Min.)         Workthmes (Min.)         Workthmes (Min.)         Workthmes (Min.)         Workthmes (Min.)         Workthmes (Min.)         Monthmes (Min.)	13.1099		:	2-Wire Copper Loop	Long (w/LML)		1				
Colument   Colument	ali (oviet	DISCONNECT				1		-			
Connect at EB-118)+(E19*119*L19)         CONNECT & TEST         AVXX<		46	Months	COLOCULA GENERAL						1	
Connect at test   Connect at			200	(=INFO IS MISCICE)							
Pecific   Peci					Worktimes (I	<b>E</b>					
SERVICE INQUIRY   SOWC   31.90   0.00   0.5317   0.0000   0.2242	Course		JFC/JG/		First		,,,,,		MORUM	PS (Hrs.)	
SERVICE INQUIRY   SDWC   31.90   0.00   13.45   0.00   0.5317   0.0000   0.2242	uts Service Inquiry Row 15	Description	WS	First Install	Disconnect	Addt Install	Disconnect	Elect leader	i		Addti
SERVICE INQUIRY   230X   45.00   10.00   10.00   0.5317   0.0000   0.2242	the Service location Days 40	SERVICE INQUIRY	SDWC	31.90	80	43.45	The state of the s	LESCHUSCEII	ringt Disconnect	Addti Install	Disconnect
### (#E10*110*E610*J0)*B5)	Si MON J. MON IS	SERVICE INQUIRY	230X	6	3	0.43	900	0.5317	00000	CFCC 0	0000
+((E10*110+E10*10)*B5) ENGINEERING JG57 24.94 0.000 24.94 0.000 0.4156 0.0000 0.4156 0	JIS Engineering.		<b>S</b>	A) C+	80.00	900	10.00	0.7500	0.000	0 4567	0.000
1,0,	*18)+(E8*J8)+(E9*19)+(E9*J9)+((E10*110+E10*J10)*B5)	FNGINEEDING	130					1 1 1 1 1		200	0.1667
E18*J18)+(E19*119*L19)  E18*J18)+(E19*119*L19)  CONNECT & TEST 4AXX 2000 0.00 0.00 0.00 0.00 0.00 0.00 0.	uts_Engineering, (E7*17)+(E7*J7)+(*E11*111)+(E11*111)	ENCINCEDINO	100	24.94	000	24.94	000	0.4156	0000		
E18*J18)+(E19*119*L19)  E18*J18)+(E19*119*L19)  CONNECT & TEST 4AXX 35.94 28.94 857 3.00 0.5990 0.4823 0.0000  CONNECT & TEST 4XX 2.00 0.00 0.00 0.000 0.000 0.000 0.0000  CONNECT & TEST 4.11X 73.16 47.00 34.16 8.00 1.2193 0.7833 0.0000  E18*J18)+(E19*119*L19)  CONNECT & TEST 4XX 35.94 28.94 857 3.00 0.5990 0.4823 0.0000 0.000 0.000 0.000 0.000	its_Engineering, Row 19 + 20	CHACINECKING	દુ	20.00	80	200	2	2000	0000	0.4156	0.000
E18-J18)+(E19*19°L19)  E18-J18)+(E19*19°L19)  CONNECT & TEST	Its Engineering Row 15	ENGINEERING	4X4X	4.95	2.65	2.70	9	2000	0.000	0.0833	0.0000
125  CONNECT & TEST   4AXX   35 94   28 94   8 57   3 00   0.5990   0.4823   0.0400   0.0058   0.0400   0.0058   0.0400   0.0590   0.4823   0.0420   0.040	ts Connect & Test	ENGINEERING	4M1X	2.40	0.35	240	2 2	C7800	0.0442	0.0450	0.0067
CONNECT & TEST	1114)+(E15115)+(E16116)+(E18148)+(E101404)					3	Ç.	0000	0.0058	0.0400	0.0058
CONNECT & TEST 4AXX 35.94 28.94 8.57 3.00 0.5990 0.4823 0.1428 0.000 0.00 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.00	(2*122*L22)+(E24*124)+(E25*125)				_						
CONNECT & TEST 4WXX 2.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	R Connect & Test Dom 40	CONNECT & TEST	4AXX	35.94	28 04		-				
CONNECT & TEST 431X 10.20 0.00 0.00 0.0333 0.0000 0.000 0.000 0.0	7+ MOU TO THE PROPERTY OF	CONNECT & TEST	4WXX	200	5 6	0.0	88	0.5990	0.4823	0 1428	0000
98 CONNECT A TEST 411X 73.16 47.00 34.16 8.00 1.2.193 0.725 0.00000000000000000000000000000000000	IS CONNECT & Test, Row 46	CONNECT & TEST	200	3	8	8	000	0.0333	0000	07000	0000
CONNECT & TEST 411X 73.16 47.00 34.16 8.00 1.2193 0.7833 0.0869 1.2193 0.7893 0	8 Connect & Test Row 31.38	5 10 11 10 10 10 10 10 10 10 10 10 10 10	¥124	10.20	12.75	5.10	205	0 4300	3	3300	0000
TRAVEL 411X 20.00 20.00 0.00 0.00 0.3333 0.3693 0.00000	S Travel Pow 7	CONNECT & TEST	41.X	73.16	47.00	27.16	3	3	0.2125	0.0850	0.0992
0.00 0.3333 0.3333 0.3333		TRAVEL	411X	2000	8 8	2 6	3	1.2193	0.7833	0.5693	0 1333
	The second secon				3	3	000	0.3333	0.3333	0000	0000
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389 Tennessee				1		,	¥	-	٦	¥
290 Nonrectiming Worktimes				1						
Series and Marketings										
391 Study Period: 2000-2002				•			:		: : : : :	
3302					1					
393 A.13.11	INSTALL	-	2 Wiles Conner I need I need to the	1		:		!		_
34A.13.1199	DISCONNECT		- door leddon sink	COLD (M/O FINO					-	
395 Location Life				:						
300	0+	40 Months	(=INPUIS MISCICE)				-			
				Worktimes (Min.	Min.)			Worktimes (Hrs.	es (Hrs.)	
		JFC / JG /		First		Addti				Adde
397 Source	Description	WS	First Install	Disconnect	Addtl Install	Disconnect	First install	First Disconnect	Added Install	Diegonali
398 Inputs_Service Order, Row (E7*17)	SERVICE ORDER	230X	1.05	105	105	5		2000		DISCOURSECT
Inputs_Engineering.						3	2	2000	0.0173	C/10.0
(E8*18*K8)+(E8*J8*K8)+(E9*19*K9)+(E9*J8*K9)										
399 +((E10*I10*K10+E10*J10*K10)*B5)	ENGINEERING	JG57	576	6	2,40	8	0000	0000		
Inputs Engineering,				3	P	3	0.04.16	9	0.0416	00000
400 (E7*17*K7)+(E7*J7*K7)+(*E11*111*K11)+(E11*J11*K11)	ENGINEERING	4FXX	000	8	9					
401 Inputs Engineeding Row 10+20	CARCALLA	<b>\</b>	8.7	3	3	80	0.0333	0000	0.0083	0000
OZ+C: MOV British Code	ENGINEERING	¥¥¥	4.95	2.65	2.70	0.40	0.0825	0.0442	00450	0.0067
402 inputs Engineering Row 15	ENGINEERING	4M1X	2.40	0.35	2.40	0.35	0.0400	0.0058	200	9000
Inputs_Connect & Test,						}	3	833	3	90000
(E14*114)+(E15*115)+(E16*116)+(E18*J18)+(E19*119*L19)										
403 +(E22*122*L22)+(E24*124)+(E25*125)	CONNECT & TEST	4AXX	35.94	28 04	8 57	5	000	7		
404 Inputs Connect & Test, Row 42	CONNECT & TEST	AWXX	200	5	5	3 8	0.030	0.4623	0.1428	0.0500
405 Inputs Connect & Test Row AR	TOTAL TOTAL		3	3	3	3:	2220	0.0000	0000	0000
OF THE COURT OF TH	CONNECTOR	431X	25.01	12.75	5.10	5.95	0.1700	0.2125	0.0850	0 0000
TOTAL INTERIOR OF 1881, TOW 31-30	CONNECT & TEST	¥1.	73.16	47.00	34.16	8.00	1.2193	0.7833	0.5693	0 1333
AUTHINALS TRAVEL KOW /	TRAVEL	41X	2000	20.00	800	80	0.3333	0.3333	0000	200
<b>87</b>									3	3
408										

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5 Tennessee										
Nonrecuring Worklimes	!									
Study Ferror good and a second										
gA.13.1098	TESTING		2-Wire Copper Loop - Long (w/LMU)	Long (w/LMU)						•
of the state of th	46	46 Months	(=INPUTS MISCIC9)							
		:		Worktimes (Min.	Min.)			Worktimes (Hrs.	s (Hrs.)	
		JFC/JG/		First		Addti				Addti
Source	Description	ws	First Install	Disconnect	Addtl Install	Disconnect	First Instail	First Disconnect Addti Install	Addti Instali	Disconnect
84 Inputs Connect & Test, Rows 20+22	CONNECT & TEST	4AXX	48.59	0.00	48.59	00.0	0.8099	0.000	0.8099	00000
BS Inputs Connect & Test, Row 46	CONNECT & TEST	431X	08.9	0.00	3.40	000	0.1133	0.000	0.0567	00000
86 Inputs Connect & Test, Rows 33+34+35+37	CONNECT & TEST	411X	45.10	0.00	45.10	000	0.7517	0.000	0.7517	0.0000
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V	60	o	٥	u						
4 (d Tannaceau						2		-	7	¥
		_								
411 Nonrecurring Worktimes										
412 Study Period: 2000-2002	1	:		!						
C17		<u> </u>		1	-	:				
414A.13.1198	TESTING		2 Wire Conner   con	1 000 1 000		1				
38		-	OHI CAN FINE TOOK I MAN							
416 Location Life										-
		WOUNS	(EDIDSIMISCICE)	1						
				Worktimes (Min.)	Min.)			Workthmes (Hrs.	s (Hrs.)	
		JFC / JG /		First		Addti			7	Addel
Source Source	Description	WS	First Install	Disconnect	Disconnect   Addtl Install	Disconnect	First Install	First Disconnect Addit Install	Added Install	Discontinue
119 Inputs Connect & Test, Rows 20+22	CONNECT & TEST	4AXX	48.59	000	48.59	8	ooua o	0000	THE WATER	The Contract
420 Inputs Connect & Test, Row 46	CONNECT & TEST	431X	6.80	900	3.40	8 8	0.0033	3000	0.0039	0.000
421 Inputs Connect & Test, Rows 33+34+35+37	CONNECT & TEST	411%	46.10	3 8	9	3 8	3	0.000	0.036/	00000
221	L		2	3	2	3	0.751/	0.000	0.7517	0000
12X										
										-

INSTALL  DISCONNECT  DESCRIPTION  SERVICE INQUIRY  SERVICE INQUIRY  SERVICE INQUIRY  SERVICE INQUIRY  SERVICE INQUIRY  SERVICE INQUIRY  SERVICE INQUIRY  SERVICE  CONNECT & TEST  TRAVEL  TRAV
Des SERVICE ENGINE ENGINE CONNEC CONN

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46 l ennessee					-	9	I			¥
47 Nonrecurring Worktimes		:								
Church Doctors: 2000 2000				_						
Stary Failou. Count-Cour		:			1		1		:	
231							:			
150 A.14. 1098	TECTION						_			
			4-Wire Copper Loop - Long (w/LMU)	- Long (w/LMU)	!		!			
Til response							-	. !		
ראלימסט רוונפ	35	52 Months	(=INPUTS_MISCIC11)		1		1	:		
				Worktimes (Min.)	lin.)	i	-	1	-	
		151131						Worktimes (Hrs.	<b>€</b>	
Source	Description	WS	First lostall	First		Addti				Addti
454 Inpute Concest & Took Concession			110000000000000000000000000000000000000	Disconnect Addit Install	1	Disconnect	First Install	First Install   First Disconnect   Addtl install	Addtl install	Disconnect
The second real Monary	CONNECT & TEST	4AXX	72.89	8	73 80	90.0				
456 Inputs_Connect & Test, Row 46	CONNECT & TEST			3	60.7	3	1.2149	0000	1.2149	0.000
Connect & Test Come 20, 24, 25, 25	COMMENT OF LEGI	421X	9	000	3.40	00:0	0.1133	00000	0.0567	0000
11-cm Culling a 1691, NOWS 33+34+33+3/	CONNECT & TEST	411X	94 29		61.00	1		3	) (0.000)	0.000
		!		3	8	3	1.1276	0000	1.1276	00000
			_	_			*		-	

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<u>\$</u>	460 Tennessee		,		ш	u.	9	Ξ			,
<u>\$</u>	4611 Nonrecurring Workings		:							7	×
	epilmylon A				· ·	T : 1					
P P	462 Study Period: 2000-2002			į.	:						
463			:								
464	464 A.14.11										
88	A64 A 14 1199	INSIALL	-	4-Wire Copper Loop - Long (w/o LMU	Long (w/o LMU		1				
7		DISCONNECT	:							_	
\$	466 Location Life		52 Months	( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )		-					
467	The second secon		e in the	(LL) SIM SIDANI-)							
					Worktimes (Min.	Min.)			100		
		-	JFC / JG /						WORKIIMES (HIS.	18 (HITS.)	
ş	Source	Description	WS	First Install	Disconnect	A 4446 Page 1	Addti	; ;			Addti
<u>\$</u>	469 Inputs_Service Order, Row (E7*17)	SERVICE ORDER	2307	105	TO SECOND		Disconnect	=	First Disconnect	Addti Install	Disconnect
=	Inputs Engineering,		3	CO.	8	8	50.	0.0175	0.0175	0.0175	0.0476
_	(E8*18*K8)+(E8*J8*K8)+(E9*19*K9)+(F9*J9*K9)										0.00
470	470 +((E10*110*X10+E10*J10*X10)*B5)	ENGINECENT									
_==	Unouts Engineering		) (25)	2.49	000	2.49	000	0.0416	00000	0.0416	0000
,,,,						_					8
Í	4/1(e' '' K'/*(e' 'J''K'/)*("E11*111*K11)*(E11*J11*K11)	ENGINEERING	4FXX	200	5	6					
4/4	472 inputs_Engineering, Row 19+20	ENGINEERING	AMAX	90 7	3 8	3 (	8	0.0333	0000	0.0083	00000
= 4 4 4	473 Inputs Engineering, Row 15	FNGINFERING	× × × ×	2	C0.7	2.5	0.40	0.0825	0.0442	0.0450	0.0067
<u>=</u>	Inputs_Connect & Test,		<u> </u>	04.7	0.35	2.40	0.35	0.0400	0.0058	00700	0.000
<u>=</u> _	(E14*I14)+(E15*I15)+(E16*I16)+(E18*J18)+(E19*I19*M19)									}	200.0
\$	474 +(E22'122'M22)+(E24'124)+(E25'125)	CONNECT & TEST	AAXX	70.36	į						
47 <u>5</u>	475 Inputs Connect & Test, Row 42	CONNECT A TEST	200	3, 2,	78.24	8.57	88	0.5990	0.4823	0 1428	0.050.0
476 In	Inputs Connect & Tact Dow 46	COMMECT & LEGI	444	2.00	80	80	000	0.0333	0000	0 0	0000
Ţ	The Course of Table 10	CONNECT & TEST	431X	10.20	12.75	5	90 9	2000	0000	0000	00000
	Highlia Cultified a 1881, KOW 31-38	CONNECT & TEST	411X	90.23	5	3	6	3	0.2125	0.0850	0.0992
<u> </u>	4/8 inputs I ravel, Row 7	TRAVEL	411X	8	3 8	3	12.W	1.5039	0.8500	0.8539	0.2000
÷				3	3	8	8	0.3333	0.3333	0000	0000
480								1			2000
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481 Temessae		ر	0	U	Ļ	J				
						,	_	_		7
482 Nonrecurring Worktimes		:	: 1							
483 Study Period: 2000, 2002	-								-	
1007 DDD 1007 DD 1007		_			!					
485 A.14.1198							1			
98	TESTING		4-Wire Copper Loop - Long (w/o LMU)	ong (w/o LMU)						
B7 Location Life	:				1	1			:	
88		52 Months	(=INPUTS_MISCIC11)						!	
				Worktimes (Min.)	-		I	T	7	
		JFC/JG/		Fire				Worktimes (Hrs.)	& (Hrs.)	
Source	Description	SM	First Install	ţ	Adde 1-000	Nage .	i			Addtl
190 Inputs Connect & Test, Rows 19+22	CONNECT & TEST	447.	t			Disconnect	First Install	First Install First Disconnect Addtl Install		Disconnect
191 Inputs Connect & Test Row 46	5	<b>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</b>	68.77	8	72.89	00:0	1.2149	0000	T	0000
	CONNECT & TEST	431×	089	2				2	C+17.	0000
92Inputs Connect & Test, Rows 33+34+35+37	CONNECT & TEST	411X	67.66	3 8	3.40	8	0.1133	0000	0.0567	00000
			8	=	E7 CE	3				

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INPUTS\_SERVICE ORDER Study Date: 11/2000

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2 Detailed Labor Worktimes         First Install         First Install         First Install         First Install         First Install         First Install         First Install         Addtl Disconnect         Fallout)           2 Detailed Labor Worktimes         Study Period: 2000-2002         Worktimes (Min.)         Worktimes (Min.)         Probability           4 LCAC L CARRIER         Source         Description         JG / WS         First Install         Disconnect         Addtl Disconnect         Fallout)           4 LCSC receives request         Interconn Svcs. SERVICE ORDER         230X         15.00         15.00         15.00         7%		·	٠.	•					
Source Description JG / WS First Install Disconnect Addtl Install Addtl Disconnect Interconn Svcs. SERVICE ORDER 230X 15.00 15.00 15.00 15.00	Tonnoceon			٥	ш	L.	c	2	
Source Description JG / WS First Install Disconnect Addtl Install Addtl Disconnect Interconn Svcs. SERVICE ORDER 230X 15.00 15.00 15.00 15.00	- Langage						,		_
Source Description JG / WS First Install Disconnect Addtl Install Addtl Disconnect Interconn Svcs. SERVICE ORDER 230X 15.00 15.00 15.00 15.00	2  Detailed Labor Worktime	•							
Source Description JG / WS First Install Disconnect Addtl Install Addtl Disconnect Interconn Svcs. SERVICE ORDER 230X 15.00 15.00 15.00 15.00	Study Period: 2000-2002			:	:				
Source Description JG / WS First Install Disconnect Addtl Install Addtl Disconnect Interconn Svcs. SERVICE ORDER 230X 15.00 15.00 15.00 15.00								:	
Source         Description         JG / WS         First Install         Disconnect         Addtl Install         Addtl Disconnect           Interconn Svcs.         SERVICE ORDER         230X         15.00         15.00         15.00         15.00	Item/Description	:			1				
Source         Description         JG / WS         First Install         Disconnect         Addtl Install         Addtl Disconnect           Interconn Svcs.         SERVICE ORDER         230X         15.00         15.00         15.00					·	Workti	mes (Min.)		
SourceDescriptionJG / WSFirst InstallDisconnectAddtl InstallAddtl DisconnectInterconn Svcs.SERVICE ORDER230X15.0015.0015.0015.00	SERVICE CENTER								
Interconn Svcs. SERVICE ORDER 230X 15.00 15.00 15.00 15.00 15.00	(CSC)	Source	Description	JG / WS	First Install	First	A - A - A - A - A - A - A - A - A - A -		Probability
Interconn Svcs.         SERVICE ORDER         230X         15.00         15.00         15.00         15.00	LCSC receives request					Danier	Addti install	Addtl Disconnect	(Fallout)
15.00	and issues service order.		SERVICE ORDER	230X	15.00	15.00	16.00		
						20.51	13.00	15.00	%/

INPUTS\_SERVICE INQUIRY Study Date: 11/2000

HamDescription   Reals Support Group (CRSG)   Source   Description   Grand First   First   First   First   Mortifines (Min.)	1 Tennessee	a	0									
Monthlines   Source   Description   Gest   Source   Description   Gest   Source   Description   Gest   Source   Description   Gest   Source   Description   Gest	2 Detailed the water						<b>σ</b>	Ξ				
	Study Dail 1 200 1				1	-					¥	_
Norktimes   Probability   Pr	4 Teriod: 2000-2002	:		· :							-	
Morttimes   Sunce   Description   JG / WS   First   Morttimes   Min.	4	-					; 					
Work Activities         Source Interest         Description         JG / WS         First Install         First Install         Addtl Install         Addtl Install         Probability (Failout)           am receives LSR & Si         CRSG         SERVICE INQUIRY         SDWC         3:00         0:00         1:00         0:00         1:00%         1:00%         1:00%           a CLEC acknowledging receipt         CRSG         SERVICE INQUIRY         SDWC         5:00         0:00         0:00         1:00%         0:00         1:00%			+			Workt	imes (Min.)	:		:		i :
CRSG   SERVICE INQUIRY   SDWC   SDW	4	S				First	Addri	Added		Probabili	y (Fallout)	
## SCHOOL   100%	CRSG/Acct Team receives LSR & SI	CRSG	1	٠.		Disconnect	Install	Disconnect	First fraction	First		Addti
Stresponse   CRSG   SERVICE INQUIRY   SDWC   South   SOUTH	CRSG module of the	CRSG	-		8.8	0.00	150	000	400%	Disconnect	Addti Install	Disconnect
Si transmittation   CRSG   SERVICE INQUIRY   SDWC   5.00   0.00   0.00   0.00   100%   0.0%   100%	and begins tracking procedure.				3	0.00	<u>د</u>	000	100%	800	400%	%0
Stresponse, propaga   CRSG   SERVICE INQUIRY   SDWC   5.00   0.00   2.00   0.00   100%   10	O CRSG prepares SI transmitted to Contract	CRSG			4 60	Ġ				8	100%	%
firms log: notifies CLEC; and authin commitment         CRSG         SERVICE INQUIRY         SDWC         10.00         0.00         5.00         0.00         100%         100%         100%         100%           d within commitment uires negotation with separation with separation with separation with a regulation of the secretarion of th	CRSG receives SI response prepared CRS	CRSG			3 5	8 8	800	0.00	100%	80	1006	į
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d within commitment units regulations:         CRSG         SERVICE INQUIRY         SDWC         10 00         0.00         5.00         0.00         100%         0.00         0.00         0.00         33%         0.00         0.00         33%         0.00         24%         0.00         24%         0.00         24%         0.00         24%         0.00         24%         0.00         24%         0.00         24%         0.00         24%         0.00         24%         0.00         24%         0.00         24%         0.00         24%         0.00         24%         0.00         24%         0.00         24%         0.00         24%         0.00         0.00         24%         0.00         0.00         24%         0.00         0.00         24%         0.00         0.00         24%         0.00         0.00         24%         0.00 <t< td=""><td>closes out folder</td><td>CBSC</td><td>0000000</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>8</td><td><b>%</b></td></t<>	closes out folder	CBSC	0000000								8	<b>%</b>
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Workfilmes* Probabilities)         CRSG         SERVICE INQUIRY         15.00         0.00         7.50         0.00         24%         0.00         24%         24%           Very Central Commitment of Firm order Commitment Service Indeption         Source Service Indeption         Description         Install Disconnect Install Install Disconnect Install Install Disconnect Install Install Disconnect Install Install Disconnect Insta	Si response no line so	CRSG	SERVICE INQUIRY		9		_	-		\$		%
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	SERVICE ADVOCACY CENTER (SAC) SOURCE	Source	Description	94/0	First	First	Addti	Addt		No Spares	Probability	:
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Ľ	OSPE Investigation and I Mil boking	Management	ENGINEERING		200	8	8	000	<b>*</b> 06	364	ž	
L	OPSE finds compatible facility (No sname		SAMOUN ELACITACIENTELLING	3	8	8	000	80	*06	Š	Š	1
<u> </u>	8 situation only)	Network	ENGINEERING	7G57	20.00	8	8	8		: :		
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Ľ	15 Assigns from facilities			26/113	Matan	Disconnect	To the	Disconnect	Frater	(Fallout) - Dien		
l۳		NO.	NOWOUL ENGINEERING	¥ X	90	200	88	86.	30%	%6	1	-
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	CIRCUIT PROVISIONING GROUP				4-19							
=	(CPG)	Source	Description	JG / WS	Pater	Disposer	Your I	Addi	:	F	Addu	Addti
위	19 Processes request	Network	Network ENGINEERING	ANAX	8	3		CHICOTHECK		Disconnect	Fretail	Disconnect
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8 2	2) WORD document for CLEC and Field	Network	Network ENGINEERING	****	9	8	00 81	8	15%	ž		3
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INPUTS\_CONNECTATEST Study Date 11/2000

Description JG.  TEST 4A  CONNECT 8  TEST 4A  TEST 4A  TEST 4A  TEST 4A  TEST 4A  TEST 4A  TEST 4A  CONNECT 8  TEST 4A  TEST 4A  TEST 4A  TEST 4A  TEST 4A  TEST 4A  TEST 4A  TEST 4A  TEST 4A  TEST 4A  TEST 4AX  TEST 4AX  TEST 4AX  TEST 4AX  TEST 4AX  TEST 4AX  TEST 4AX  TEST 4AX  TEST 4AX  TEST 4AX  TEST 4AX  TEST 4AX  TEST 4AX  TEST 4AX  TEST 4AX	1	Α	le l	J	٥	-								
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Internible deliverorit Element Center (UNEC) Work   Source   Description   Description   Source   Description   Source   Description   Source   Description   Source   Description   Source   Description	~ ~	Detailed Labor Worktimes Study Period: 2000-2002	:	,				-4				:		Σ
Unbundled Newtock Energy (Secretary Contract UNREC) Work   Source   Description   10 First   Model Install   Disconnect   Resease   Re	<u>1</u>			-								. !		
Unbundled Network Element Center (UNEC) Work   Source   Description   Life was a controlled by Source   Description   Life was a controlled by Source   Life was a controlled	1	Item/Description					Work	times (Min.)		:				:
Classication (15% of orders at 1.2 min.)   Section   Convector at 1.7 min.)   Section   Convector at 2.4 min.   Section   Convector at 2.4 min.	9		,		9	F	First		Addti	Probability /	Probability /	Probability		
1   Statustified (55% of orders at 2.4 min)   Sinceron   Chowleting   AAX   2.40   2.40   2.40   0.0   55%     2   Statustified (55% of orders at 1.5 min)   Sinceron   Chowleting   AAX   15.50   15.60   0.0   17%     3   Statustified (5.5% of orders at 1.5 min)   Sinceron   Chowleting   AAX   15.50   15.60   0.0   17%     4   AAX   15.50   15.60   0.0   17.50   0.0   17.50   0.0   17.50     5   Assas Catis (6% of orders at 1.5 min)   Sinceron   Chowleting   AAX   15.50   1.50   0.0   0.0   0.0   0.0     5   Assas Catis (6% of orders at 1.5 min)   Sinceron   Chowleting   AAX   15.50   0.0   0.0   0.0   0.0   0.0     5   Assas Catis (6% of orders at 1.5 min)   Sinceron   Chowleting   AAX   15.50   0.0   0.0   0.0   0.0   0.0     6   AAX   15.50   AAX   15.50   0.0   0.0   0.0   0.0   0.0     6   AAX   15.50   AAX   15.50   0.0   0.0   0.0   0.0   0.0     7   AAX	-	Provisioning Variables	2000	rescribnon	JG / WS	Testal	Disconnect	Addt Install	Disconnect	Reuse	Reuse	Reuse	2W / 4W	Multiplier
10   Experimental Class of codes at 1.2 min.   Secaration CONNECTE   4.XXX   2.40   2.40   2.40   0   55.5   2.40   0   55.5   2.40   0   5.5   2.40   0   5.5   2.40   0   5.5   2.40   0   5.5   2.40   0   5.5   2.40   0   5.5   2.40   0   5.5   2.40   2.40   0   5.5   2.40   2.40   0   5.5   2.40	-		Interconn		!	:								
3   State Carles (6 M or orders at 1.5 min.)   Street   Charles   AxXX   120	•		Svcs		*¥X	2.40	2.40	2.40	0	25%				
14   Assat Cale, (6% of orders at 15 6 min.)   Sinceron   CONNECT & AXX   150   1500	6	(2) Escalations (12% of orders at 7.2 min.)	Svcs	CONNECT &	AAXX	5	3	:	:			!		
Control of the cont	ç	(7) Acoics Called 1994 of the second	Interconn	CONNECT &	<b>S</b>	3.	Ŗ.	2,30	0	12%				
	₽ _	(c) Assist Calls (by or orders at 15.6 min.)	Svcs	COMMECT	4¥X	15.60	15.60	15.60	0	<b>%</b> 9				:
Total of Workfulnes   Probabilities   Probab	=	(4) Jeopardy (25% of orders at 1.8 min.)	Sycs	TEST	4AXX	1.80	087	8		1				
Provisioning variables: when UNEC puls order information and assigns to work groups: Svcs.   TEST   4AXX   357	≃ :	lotal of Worktimes * Probabilities				3.57	3.57	3.57	5 6		:	i		
Provisioning variables - when UNEC pulls acder information and assigns to work groups   Svess   TEST   AAXX   8.00   8.00   100%   1.00   1.00	<u> </u>	-												
Verification   Particle   Parti	=	UNEC pulls order information and assigns to work groups.	Interconn Svcs.	CONNECT &	4AXX	8.00	8.00	: 8	8					
Verifies and ensures accuracy of order design   Verifies and ensures accuracy of order design   Verifies and ensures accuracy of order design   Verifies and ensures accuracy of order design   Verifies and ensures accuracy of order design   Verifies and ensures accordination and   Verifies   Ver	2	information (Row 12)	Sves	CONNECT &	***		:	3	3	Š			9.	
Chaetes cut sheets to verify reuse of facilities   Svcs.   TEST   AAXX   5.00   0.00			Interconn	CONNECT &	<b>§</b>	) C C	3.5/	3.57	00.0	100%	:		8	
Creates cut sheets to verify reuse of facilities   Svcs.   Crownect of Special Infercorn   Connect of Svcs.   TEST   4AXX   5.00   0.	0	vernes and ensures accuracy of order design	Sycs	TEST	4AXX	2.00	3.00	2.00	3.00	7001		-	:	
Firetives dispatch   Sixes   TEST   AXX   Sixes   O.00	ন	Creates cut sheets to verify reuse of facilities	Svcs	TEST	4AXX	5	8			!		-	3	
Performs frame continuity and due date coordination and liverconnoises and completes order (Row 12)   Sives   TEST   4AXX   53.60   0.00   53.60   0.00   65%   1.00   1.00		4	Interconn	CONNECT &		3	3	8	8	<b>%</b> 08	, %0	100%	8	
Performs frame continuity and due date coordination and intercon	<u> </u>	in the date and the continue of the continue o	SVCS	TEST	4AXX	200	000	0.00	000	30%	1000			
Performs frame continuity and due date coordination and   Interconn   Svcs.   TEST   AXX   S4.00   0.00   54.00   0.00   65%   1.00   1.00		and under continuent and one continuent and	Syre	CONNECT &	>>					2	<u>\$</u>		8	
Vesting   Svcs.   TEST   AXX   S4.00   0.00   65%   1.00	_	Performs frame continuity and due date coordination and	Interconn	CONNECT &	Ş.	8	8	23.60	000	85%			8.	5
testing   Sycs.   TEST   AAXX   Str.   Str.   Sycs.   TEST   AAXX   Str.   Str.   Str.   Str.   Sycs.   TEST   AAXX   Str.   Str.   Str.   Sycs.   TEST   AAXX   Str.   Str.   Str.   Str.   Str.   Sycs.   TEST   AAXX   Str.	<u> </u>	from a continue of the state of	Svcs	TEST	4AXX	54.00	00.0	24 00	8	à				3
Provisioning variables - Lesting (Row 12)         Interconn Converted on existing facilities         Interconn Converted on existing facilities         TEST No.00         4AXX         3.57         0.00         865%         1.00           Performs manual order coordination (remote call forward disconnect and unbundled loop order) when service is Svcs.         Interconn CONNECT & Svcs.         TEST No.00         4AXX         20.00         0.00         20.00         80%         1.00         1.00           UNEC contacts customer and completes order (Row 12)         Interconn CONNECT & Svcs.         TEST No.00         4AXX         3.57         3.57         0.00         100%         1.00           Indicates order (Row 12)         Svcs.         TEST No.00         4AXX         3.57         3.57         0.00         100%         1.00		s inerrie continuity and due date coordination and	Interconn	CONNECT &				}	3	8		i	8	
Fronsioning variables - testing (Row 12)   Svcs. TEST   AAXX   3.57   0.00   85%   1.00   1.00	<u> </u>		Interconn	CONNECT &	¥¥X	8	0.00	8		85%			8	1.50
disconnect and unbundled loop order) when service is Svcs.  Interconn CONNECT & 20.00 0.00 0.00 80% 1.00 1.00	<u>. a</u>		Svcs	TEST	4AXX	3.57	000	3.57	2	à				3
Converted on existing facilities         Montange of the control	. <del>0</del>		100000			·	·		3	₹:			8	1.50
UNEC contacts customer and completes order         Svcs.         TEST (AXX)         4AXX         10.80         10.80         0.00         0.00         100%           Provisioning Variables - when UNEC contacts customer and completes order (Row 12)         Intercorn         CONNECT & AXX         3.57         0.00         0.00         100%		SI DOM DE LOUIS (SOS	Syrs	CONNECT &	>>	8								
UNIEL contacts customer and completes order Svcs. TEST 4AXX 10.80 10.80 0.00 1.00%	_		Interconn	CONNECT &	<u> </u>	8	8	20.00	800	80%	10%	100%	9.	
and completes order (Row 12) Svcs. TEST 4AXX 3.57 0.00 0.00 100%	<u> </u>	astomer	Svcs.	TEST	4AXX	10.80	10.80	000	000	100%				
%00t 000	ā		Sycs	TEST	4AXX	3.57	3 67				:	:	3	
			÷			·	ò	8	8	100%		- <del>-</del>	8	

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L		-				Work	Worktimes (Min.)							Т
, <b>8</b> 8	SPECIAL SERVICES INSTALLATION & MAINTENANCE (SSI&M) WORK ACTIVITIES	Source	Description	SSIM JG	First Install	First Disconnect	Addt Install	Addti Disconnect	Probability, Dispatch Rate, Fatiout)	MY / MA	W / WW Lt. Hindling			
જ														
L		:	CONNECT	i :			!							
뒤	31 Processes requests	Network	TEST	411X	20.00	20.00	000	5	1004		!			
33	32 Places/removes cross-connect at crossbox	Network	CONNECT &	<b>4</b> 11×	6.0	8	9		8	3	3			
8	33 Checks continuity and dial tone		CONNECT &			3	3	3	100%	1.80	1.50		:	
Γ		Network	COMMECT	¥1.	15.00	000	15.00	0.0	100%	9:	55			
2	34 Trouble resolution at crossbox	Network	CONNECT &	411X	45.00	000	45.00	5	300		3	:		
22	35 Tests from NID	Network	CONNECT &	411X	, E	8	30 00	3	8	8	<b>3</b> .		;	
			CONNECTA	\$	3:	3	8	8	100%	8	8			
φĪ	36 Tags Loop	Network	TEST	411X	3.00	0.0	300	8	900+					
~	37 Trouble resolution at premises	Network	CONNECT &	}				3	\$	3	1.50		i	
			CONNECTA	<u> </u>	3	8	26.00	800	21%	9:	1.50			
<u>ج</u> ا	38 Completes order	Network	TEST	411X	19.00	19.00	000	0.0	100%	٤			:	
3 8	Man ( ) Man	:	- !	-						3	3	-		
+						Workt	Worktimes (Min.)	:			: : :	1		
Ŧ	WORK MANAGEMENT CENTER (WMC)	Source	Description	JG / WS	First	First	1	Addt						
	WAY Consults and all all and all all and all all and all all and all all all and all all all and all all all all all all all all all al		CONNECT &			The contract of	The Install	Disconnect		- 1			r	_
<b>1</b>	43	Network	TEST	4WXX	2 00	000	0.0	0.00						
3	Item/Description													
_						Workti	Worktimes (Min.)							-
									15% Carried in					
<b>£</b>	CENTRAL OFFICE FORCES (CO)	Source	Description	JG / WS	First	First	Addit Install	Addti	Transport					
- 2	46 CO Field wires circuit at collocation site	Math	CONNECT &					DISCOURSE	Elements		:	· · · · · · · · · · · · · · · · · · ·		
ı		MCIWORK	153	431X	800	15.00	2000	3	450					_

BellSouth Telecommunications, Inc.

xDSL-Capable and Copper Loops

INPUTS\_TRAVEL Study Date: 11/2000

					Worklimes (Min.)			1	20 00 20 20 Edition Clarent Dispatch Rate	
		·					- v	Describtion /WS	TRAVEL 411X	
8							Soliton	821500	Network	
A	1 Tennessee	2 Detailed Labor Worktimes	3 Study Period: 2000-2002	5 Item/Description		SPECIAL SERVICES	6 (SSI&M) WORK ACTIVITIES	7 Dispatched to crosshox	VOCACA	

BellSouth Telecommunications, Inc.

2 Miscellaneous Inputs 3 Study Period: 2000-2002	<b>a</b>	O	Q	ш	O	<b>I</b>		M K L
	Source	Amount						
9 Location Life - 2 wire	LocLife.xls, Line D22	46	46 months		Co	nect / Test F	Connect / Test Percentages	
12 Subscriber Line Testion	LocLife.xls, Line D19	52	52 months		JFC			
15 Network Termining Wire	strals, Line G13	\$ 0.2061		1	14AXX 410X/411X	%09	¥ .	100%
16 % of Time LMU does not exist in LFAC	OSPE	58.8%			410X/411X 431X 431X	į	9 4 9	100% 40% 100%
					When CO or testing, the a	I&M/SSIM work	When CO or I&M/SSIM worktimes cannot be determined to be solely testing, the assumption is made that 40% of the force	determined to

xDSL-Capable and Copper Loops

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Unbundled Loop Modification

BellSouth Telecommunications, Inc.

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	Yanıı	Unburnaled Loop Modification	<b>Additication</b>				-	!
	Nonrecurring Labor	CALCULATOR INPUT FORM - NONRECURRING I	PUT FORM	NONRECL		ABOR TIMES	· ·	
	WP100	Nonrecurring Worktimes	ctimes				;	
	WP200	Nonrecurring Worktimes	ctimes	-			:	
STUANI	NPUTS_SERVICE INQUIRY	Detailed Labor Worktimes	rktimes		!		:	
NPU.	INPUTS ENGINEERING	Detailed Labor Worktimes	rktimes					
INPUTS	CONNECT&TEST	Detailed Labor Worktimes	rktimes					:
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BellSouth Telecommunications, Inc.

Unbundled Loop Modification

Investments Study Date: 11/2000

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F	STMENT DATA		it to record material and/or investments to be input into the	n are ber unit (e.g. nor call marion	t Element, leaving no hlank lines On not	t Column.	m should be cell-referenced to study workpapers.	me.		Volume	Insensitive	S Amount										!
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_			worksheet to reco	All amounts shown are per	a, by Cost Elemen	ine of data, type E	n this form shout	change columns,		di.S.	FRC	-										
A B	CALCOLATOR INPL	Instructions:	1. Use this workshee	2. All amounts shown	3. Input data, by Cost	after last line of dat	4. All data on this for	5. Do NOT change co		Cost	State Element #	·	END									
-	- 2	က	4 w	9	7	ω (	D &	= =	12	13	14 S	15 TN	16	17	18	19	20	21	22	23	24	22

Unbundled Loop Modification

Additives\_Recurring Study Date: 11/2000

Instructions:  1. Use this worksheet to record recurring non-labor expenses to be input into the Calculator calculations.  2. All amounts shown are per unit (e.g., per call, per loop, per MOU).  3. Input data, by Cost Element, leaving no blank lines. On next row after last line of data, type END in Cost Element Column.  4. All data on this form should be cell-referenced to study workpapers.  5. Do NOT change columns, headings, sheet name.  Cost Expense Description Sensitive Insensitive atte Element # (Limited to 25 characters) \$ Amount \$	be input into the	P
	be input into the	_
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Maximum 10 entries per Cost Element #		

1	CALCULATO	CALCULATOR INPUT FORM - NONRECURRING EXPENSES DATA	ING EXPENSES D	ATA			
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3	Instructions:			:		1	
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	after last li	after last line of data, type END in Cost Ele	in Cost Element Column.				:
	4. All data or		cell-referenced to study workpapers.	rkpapers.			
6		Do NOT change columns, headings, sheet name	ot name.			:	
<b> </b>	6. Use colur	Use column D when cost element has a single nonrecurring cost; use columns E. & F for elements with a first	ingle nonrecurring	g cost; use colu	mns E & F for el	lements with a t	irst
E	and addi	and additional nonrecurring cost; use columns G & H for elements with an initial and subsequent nonrecurring cost.	dumns G & H for e	elements with an	initial and subs	sequent nonrec	urring cost.
12 5							
14		Nonrecurring	!	Nonrecurring	Nonrecurring	Nonrecurring	Nonrecurring
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Dame 4 of 40

BellSouth Telecommunications, Inc.

Unbundled Loop Modification

Recurring Labor Study Date: 11/2000

bor times to be input into op, per MOU). On next row udy workpapers. Volume Volume Sensitive Insen	_	∢	В	O		Ц	2	,	
instructions:  1. Use this worksheet to record recurring expensed labor times to be input Calculations.  2. All amounts shown are per unit (e.g., per call, per loop, per MOU).  3. Input data, by Cost Element, leaving no blank lines. On naxt row after last line of data, type END in Cost Element Column.  4. All data on this form should be cell-referenced to study workpapers.  5. Do NOT change columns, headings, sheet name.  Cost Labor Expense Description JFC/I Volume  State Element # (Limited to 25 characters) Payband Sensitive  TN END  Maximum 20 entries per Cost Element #	-		CALCULAT	OR INPUT FORM - RECURRING LA	BOR EXPE	VSES DATA	-		
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3. Input data, by Cost Element, leaving no blant lines. On next row after last line of data, type END in Cost Element Column.  4. All data on this form should be cell-referenced to study workpapers.  5. Do NOT change columns, headings, sheet name.  Cost Labor Expense Description JFC/Volume  Element # (Limited to 25 characters) Payband Sensitive  TN END  Maximum 20 entries per Cost Element #	9		2. All amoun	its shown are per unit (e.g. ner cal	ll per loon	MOIN			:
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Nonrecurring Labor Study Date: 11/2000

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O CONTRACTOR	CONTROL FORM - NONRECURRING LABOR TIMES		it to record nonrecurring labor time	3. Input data, by Cost Flores.	after last line of data, type FND in Case 2.	4. All data on this form should be call-referenced.	5. Do NOT change columns, headings, sheet name	and edular F & G when cost element has a single nonzering	Input Cost Element 16-71	in months) on first row of data for each cost element. It is not necessary			6/1/2001			: : : : : : : : : : : : : : : : : : :	Labor Expense Description	(Limited to 25 characters)	SERVICE INQUIRY	SERVICE INQUIRY	ENGINEERING	ENGINEERING	ENGINEERING	CONNECT & TEST	TRAVEL	SERVICE INQUIRY	SERVICE INQUIRY	ENGINEERING	ENGINEERING	ENGINEERING	CONNECT & TEST	TRAVE				laximum of 25 antion	and an an an an an an an an an an an an an	
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1 Tennessee										
2 Nonrecurring Worktimes					!				:	
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5 A.17.2	Unbundled Loop Modification / Load Coil - Long	diffication / Lo	ad Coil - Lon	•			1			
9			-		!			:	1	
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7			(Min.)	(Hrs.)						
		JFC / JG /				!	:	:		
8 Source	Description	WS	Install	Install						
9 =(('INPUTS_SERVICE INQUIRY'E15"H7+E15/2"17)K7)"Input_Loop+Mod'ID12	D12 SERVICE INQUIRY	SDWC	29.0	0.0111					1	ī
10 =(('INPUTS_SERVICE INQUIRY:E19*H19+E19/2*119)K19)*Input_Loop+Mod:ID1	od'ID1 SERVICE INQUIRY	230X	9.0	0.0157	:		1			
11 =INPUTS_ENGINEERINGIE10/J9	ENGINEERING	JG57	112.50	1.8750			:			•
12 =INPUTS_ENGINEERINGI(E11*G11+F11*H11)/J11	ENGINEERING	4FXX	8.35	0.1392				:		
13 =INPUTS_ENGINEERING(E16*G16+F16*H16)/J16	ENGINEERING	4M1X	25.05	0.4175	:				:	
14 = INPUTS CONNECT&TEST/IE24+E29	CONNECT & TEST	420X	302.40	5.0400			-			
15 =INPUTS_TRAVELIE7/H17	TRAVEL	420X	15.00	0.2500				:		;
9.										

WP200 Study Date: 11/2000

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	1 Tennessee	æ.	ပ	٥	3	-	9
	2 Nonrecurring Worktimes		:				
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9		Unbundled Loop Modification - Additive	on - Additive		:		-
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L				Worktimes (Min.)	es (Min.)		Worktimes (Hrs.
Φ 0	Source	Description	JFC / JG / WS	Install	Disconnect	- Indeed	
n  \$	= "\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	SERVICE INQUIRY	SDWC	0.53	000	00000	Disconnect
1=	11 = (INDITS ENCINEEDINGEDINGEDINGEDINGEDINGEDINGEDINGED	SERVICE INQUIRY	230X	0.75	000	0.0003	0.000
12	12 = (INPUTS FNGINFFRINGIE140014-0144144	ENGINEERING	JG57	22.50	0.00	0.3750	0.000
12	=(INPUTS ENGINEERINGIE 46-046-146-146-146-146-146-146-146-146-146-1	ENGINEERING	4FXX	1.67	0.00	0.0278	0000
-	="NPITS CONNECTATESTICATES   DISTRICT	ENGINEERING	4M1X	5.01	0.00	0.0835	0000
5	15 = INPUTS TRAVE IEZICZ	CONNECT & TEST	420X	55.44	0.00	0.9240	0000
9		TRAVEL	420X	3.00	0.00	0.0500	0000
= =	17 DEMAND FOR CONDITIONING		2000	2004			<b>}</b>
1					7007	:	
8	20 =SUM(C19:E19)	Incoming Demand	4,593	2,376	1.754	:	
~		Cumulative Demand	8,723				
2 2	22 Input DemandIJ43-Input DemandIJ43	Incoming Demand	232	110	8		*
2	_	Cumulative Demand	439	2	8;		
22	25 # Loops Conditioned Not Recovered Elsewhere						
27	27 Amount To Ba Recovered from DRI 1 come.		41				
28	=F936C82546C82346C823			1		!	
8	_	SERVICE INQUIRY	SDWC			0.0018	- 1
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7		ENGINEERING	JG57	<del> </del> -		0.0254	
8	12-13-16-16-16-16-16-16-16-16-16-16-16-16-16-	ENGINEERING	4FXX	A. Well		9000	
R	_	ENGINEERING	4M1X			0.0168	
ੜ	_	CONNECT & TEST	420X	+	!	0.1858	
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-	1 Tennessee						,			,	¥	اً۔
7	2 Detailed Labor Worktimes	:					:					
3	3 Study Period: 2000-2002		· -	_					:			
4							-	:	-			
5	Item/Description				5	Worktimes (Min.)		Probability				
9	6 COMPLEX RESALE SUPPORT GROUP (CRSG)	Source	Description	JG/WS	Install	Add'l Install			Input_ULM LC		# Pairs # Pairs # Pairs Deloaded/Su	# Pairs Deloaded/Su
7	CRSG/Acct Team receives LSR & SI	CRSG	SERVICE INQUIRY	1	3.00	1.5	100	87%	2000	TOL S	gu ,	ploops
~	8 CRSG/Acct Team screens LSR & Si	CRSG	SERVICE INQUIRY	SDWC	8	Ľ	200	6,76	22.78	2 (	7	
	CRSG contacts CLEC acknowledging receipt and					:	3	2	22.76	2	7	-
6	9 begins tracking procedures	CRSG	SERVICE INQUIRY	SDWC	0.4	c	100%	K7%	33%	Ş		,
위	10 CRSG prepares SI transmittal to OSPE/SAC	CRSG	SERVICE INQUIRY		200		200	670	8,00	2:9	7	-
	CRSG receives SI response, prepares LCSC transmitted confirme for coulded Creek and all confirme for coulded Creek and all confirme for coulded Creek and all confirme for coulded Creek and all confirme for coulded Creek and all confirme for coulded Creek and all confirme for co	1		1	} } } 		8	2	8	<b>2</b> ¦	7	-:
=	11 out folder	CRSG	SERVICE INQUIRY	SDWC	10 00	ı.c	100%	767.67	300	•		
7	Order Complications:				2	· ·	3:	2 2	855	2	2	-
1₽	13 St not processed within commitment	CBSG	SEDVICE INCLIDA		00.00		1	% /o	33%	2	7	-
		5	אוכטאוו שכואעסוע ו	OMC.	300	o.	33%	%29	33%	₽	7	-
7	14 Si response requires negotation with CLEC/OSPE	CRSG	SERVICE INQUIRY		15.00	7.5	24%	87%	33%	ç	c	•
2 4	15 local Minutes (Worktimes " Probabilities)	:			31.90	13.45					•	-
의								· · · · · · · · · · · · · · · · · · ·		1 1 1 1 1		
1	Item/Description				. ₹	Worktimes (Min.)			Probability	:	:	
€	LOCAL CARRIER SERVICE CENTER (LCSC)	Source	Description	37.0	1	A ded! Inches		MLC	Input_ULM LC	# Pairs Deloaded/S	# Pairs # Pairs # Pairs Deloaded/S Deloaded/Lo	# Pairs Deloaded/Lo
1	LCSC receives SI, validates for accuracy and				1100	AUC I RISIGII		ā	19	Port.	ĝ	вu
9	19 processes for billing.	Interconn Svcs.	SERVICE INQUIRY	230X	45.00	22.50		87%	300	ç		
				ı				9/ 10	200	2	N	-

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1	Tennessee									
7	2 Detailed Labor Worktimes	:								:
က	3 Study Period: 2000-2002	:				!				
4										
5	Item/Description	:		Š	Worktimes (Min.	· (·				
9	SERVICE ADVOCACY CENTER (SAC)	Source	Description	JG / WS	Install	1/2 of E11	Inputs_ULM LC BT	Inputs_ULM LC BT	# Pairs Deloaded/ Short	# Pairs Deloaded/
~	7 Design of Engineering Work Order	Network	ENGINEERING	JG57	120.00				10	6
8	8 Encoding	Network	ENGINEERING	JG57	45.00				2	7 (
6	9 SAC Coordination	Network	ENGINEERING	JG57	00.09	!			2 \$	7
10	10 Total JG57 Time				225.00				2	7
=	11 Clerical log of ULM	Network	ENGINEERING	4FXX	20.00	10.00	%29	33%	1	
12							2	200	2	<b>y</b>
5						:				
7	Item/Description			Ä	Worktimes (Min.	n.)				:
	ADDRESS AND FACILITY INVENTORY		,				Inputs ULM	Inputs 11 M I C	# Pairs	Monte Clark
15	(AFIG)	Source	Description	JG/WS	Install	1/2 of E16	LCBT	BT	Short	Tong Percent
	Receives job from OSPE and posts									2
16	16 records.	Network	ENGINEERING	4M1X	60.00	30.00	%29	33%	10	2
1					1					

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Source   Description   CONNECT & TEST						-			
Source   Description   JG / WG   Install   Probability Removed   Description   JG / WG   Install   Probability Removed   Description   JG / WG   Install   Probability Removed   Description   JG / WG   Install   Probability Removed   Description   JG / WG   Install   Probability Removed   Description   JG / WG   Install   Probability Removed   Description   JG / WG   Install   Probability Removed   Description   JG / WG   Install   Probability Removed   Description   JG / WG   Install   Probability Removed   Description   JG / WG   Install   Probability Removed   Description   JG / WG   Install   Probability Removed   Description   JG / WG   Install   Probability Removed   Description   JG / WG   Install   Probability Removed   Description   JG / WG   Install   JG / WG   JG / WG   Install   JG / WG   JG / WG / WG / WG / WG / WG / WG / WG /									
Second Cell Short   Source   Description   JG / VKS   Install   Probability   Removed   Description   JG / VKS   Install   Probability   Removed   Description   JG / VKS   120 0   90%   2.1   10			•		-	:	!		
SEC) - Load Coil Short   Source   Description   J.G. / WG   Install   Probability   Ramoved   Description   Source   Description   J.G. / WG   Install   Probability   Ramoved   Description   Source   Description   J.G. / WG   Install   Probability   Ramoved   Description   Source   Description   J.G. / WG   Install   Probability   Ramoved   Description   J.G. / WG   Install   J.G. / WG   Install   J.G. / WG   J.G.	Study Period: 2000-2002								
Source   Description   JG / WS   Install   Probability   Ramoved   Description   JG / WS   Install   Probability   Ramoved   Description   JG / WS   Install   Probability   Ramoved   Description   JG / WS   Install   Probability   Ramoved   Description   JG / WS   Install   Probability   Ramoved   Description   JG / WS   Install   Description   JG / WS   J		+				:			
SPCC -Load Coll Short   Source   Description   JG / WS   Install   Probability   Stand Coll & Spring Spring   Source   Convect & TEST   420X   60.00   Conve				3					:
Source				OA I	Wilmes (M	in.)			
SEC -Load Coil Short   Source   Convect a TEST   420X   1200   90%   10   10   10   10   10   10   10	_		_				:		
Procure	OUTSIDE PLANT CONSTRUCTION (OSPC) - Load Coil Short		Description	941			# Load Coils	# Pairs	
Property   Property	Underground Application		lond mean	20, 100	III STE	Probability	Removed	Deloaded/Short	
Second   Nelwork   CONNECT & TEST   420X   6000   10	OSPC sets up man	Network	-011			*06			
Property   Convect a frest   420x   90.00   10%   10		V DAIDE	CONNECT OF LEST	420X	120.00		2.1	9	
### GONNECT & TEST   420X   90.00   10%   2.1   10   ### Herwork   CONNECT & TEST   420X   60.00   10%   2.1   10   ### Herwork   CONNECT & TEST   420X   60.00   10%   2.1   10   ### Herwork   CONNECT & TEST   420X   60.00   10%   2.1   10   ### Herwork   CONNECT & TEST   420X   100   10%   3.15   ### Herwork   CONNECT & TEST   420X   16.00   10%   3.15   ### Herwork   CONNECT & TEST   420X   16.00   10%   3.15   ### Herwork   CONNECT & TEST   420X   16.00   10%   3.15   ### Herwork   CONNECT & TEST   420X   16.00   10%   3.15   ### Herwork   CONNECT & TEST   420X   16.00   10%   3.15   ### Herwork   CONNECT & TEST   420X   16.00   10%   1.00   ### Herwork   CONNECT & TEST   420X   16.00   10%   1.00   ### Herwork   CONNECT & TEST   420X   16.00   1.00   ### Herwo		Network	CONNECT & TEST	420X	90.09	!	!	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	Total Works In the control	Network	CONNECT & TEST	420X	8				
Network   CONNECT & TEST   420X   60.00   10%   2.1   10	I DUNG I MAKE I MINE - OLIM CC - Sport-Ouder Broad	=((E8+E9+E10)*G8*F7\/H8						!!	
Metwork	Burled/Aerial Application				20.10	:			
Methods	OSPC sets up site				·	10%			<u></u>
Network	OSDC manufalment and an arrangement of the control	Network	CONNECT & TEST	420X	0009	1	2	•	
	Con conductive splices	Network	CONNECT & TEST	420X	8	1		2	
	USFC deloads 10 pairs	Natural	FOLL & FOLIATION	507	3				
SPC) - Load Coil Long   Source   Description   JG / WS   First   Addt Install   Probability   Removed	Total Work Time - III M.J. C. Short Burdandan	VOLUMN TO THE PARTY OF THE PART	COMMECT & LEST	420X	800				
Securce		=((E13+E14+E15)*G13*F12)H13							1
SPC)- Load Coil Long   Source   Description   JG / WS   First   Addt Install   Probability   Removed			:	Ī		i			
SPC) - Load Coil Long   Source   Description   JG / WS   First   Addt Install   Addt Install   Ramoved   Source   Description   JG / WS   Install   Addt Install   Addt Install   Ramoved   SON   SO	tem/Description			3	-	1			
Special Long   Source   Description   JG / WS   Install   Addit Install   Probability   Removed				0	Semina i	n.)			
Network	OUTSIDE PLANT CONSTRUCTION (OSPC) - Load Coil Long	Cource						# Load Colls	# Pairs
Network   CONNECT & TEST   420X   120 00   3.15   150   15	Underground Application	20000	Cescription	JG / WS	Install	Addti Install	Probability	Removed	Deloaded/I
Network	OSPC sets up manholes						%06		
Methwork	JOD Constitution of the second	Network	CONNECT & TEST	420X	120.00			2.46	1
Metwork   Metwork   CONNECT & TEST   420X   18.00	COLIC Upda Lay Courses Spillogs	Network	CONNECT & TEST	420X	8		1	2.13	7
Section   Convert   Conv	John Deloads two pair	Network	CONNECT & TEST	200	3 5				
Network	Total WorkTime - ULM LC Long-Underground	E//F21+F22+E2314U241C301434		¥207	3	: : :			
Network   Network   CONNECT & TEST   420X   60.00	Buried/Aerial Amilication	ויפו פנימים			280.67			-	:
Network							\$6		
Network		Network	CONNECT & TEST	420X	9	1			
Network   Network   CONNECT & TEST   420X   18.00	Solic Cuparacupaes splices	Network	CONNECT & TEST	XOC.	8			0.10	7
Source   Description   JG / WS   Install   Fabridged   Source   Description   JG / WS   Install   Fabridged   Taps   Iton   Network   CONNECT & TEST   420X   120.00   1	John deloads two pair	Network	CONNECT & TEST	200	3 9	-			
SPC  - Bridged Tap   Source   Description   JG / WS   Install   Taps   Taps   Title	Total Work Time - ULM-LC-Long-Burled/Aerial	MINDRAFO7+FORMUSECOSTAN	1031 5	5	3				
SPC  - Bridged Tap   Source   Description   JG / WS   Install   Taps   100		071629 074 677	,	:	21.74				1 1 1 1 1 1 1
Source	Item/Description								:
Source   Description   JG / WS   Install   # Bridged   # Bridged   # Bridged   # Bridged   # Bridged   # Bridged   # Bridged   Taps				NO.		7			
Taps   Taps	OUTSIDE PLANT CONSTRUCTION (OSPC) - Bridged Tap						# Bridged	# Pairs	
Network   CONNECT & TEST   420X   120.00   1.00	Underground Application	Ponnos	Description	JG / WS	Install		Taps	Deloaded/Short	
Nelwork   CONNECT & TEST   420 x   120 00     Nelwork   CONNECT & TEST   420 x   60 00     Nelwork   CONNECT & TEST   420 x   45 00     Nelwork   CONNECT & TEST   420 x   60 00     Nelwork   CONNECT	SCPC sale up markeles				-		8		:
Network	Co coco ob marindes	Network	CONNECT & TEST	420X	120.00		3	!	
tion  #{(E34+E35+E36)*G33)M34   CONNECT & TEST   420X   45.00	Jarr opendose spice	Network	TOUR PLUCT		3		;	9	
######################################	SPC removes bridged tap	7	COMMECT & LEST	470X	300				
#(E44+E35+E36)'G33)/H34	otal Work Time . III M.RTI Indernooung	MOWING THE	CONNECT & TEST	420X	45.00				
tion  Network  CONNECT & TEST 420X 60.00  Network  CONNECT & TEST 420X 60.00  Network  CONNECT & TEST 420X 60.00  Network  CONNECT & TEST 420X 45.00  #(E39+E40+E41)*G39JH39		#(E34+E35+E36)*G33VH34		-	22.50		. !	-	
Network				:		:	-	_	
Melwork	USPC sets up site	Network	COMMECT & TOO	7007			3	-	
######################################	)SPC open/close splice	Method	CONNECT & IEST	420X	- 80 09		:	2	
Neiwork CONNECT & TEST 420X = ₹(E39+E40+E41)*G38/H39	JSPC removes bridged (an	NO MON	CONNECT & TEST	420X	00.00		:	-	
=((E39+E40+E41)*G38)/H39	Odal Work Time 18 M DT B	Network	CONNECT & TEST	420X	45.00	-	:		
		=((E39+E40+E41)*G38)/H39	:		00.55		:	-	

Page 11 of 16

	-	a	ļ	,					
4	4 Item/Description		١	_	4	F	ဗ	I	-
L	Controlled the controlled the controlled			≩	Worktimes (Min.)	ii.			
	OUTSIDE FLANT CONSTRUCTION (OSPC) - Load Coil Sub-				Fire			0,	
÷		Source	Description	241		Added bases	October 1116	# Load Coils	# Pairs
\$	Underground Application			2		Will many	Propability	Kemoved	Deloaded/Long
13	47 OND cale up manhalas						<b>10%</b>		
1	Serio de literationes	Network	CONNECT & TEST	420X	120.00			+ 2	
<b>₹</b>	48 USP Copensidoses splices	Network	CONNECT & TEST	420X	8				
<b>₽</b>	49 OSPC deloads one pair (E90/L88)	Naturak	CONNECT & TEST		3 6		1	1	
S	50 Total Work Time - III M.I.C. Suh.J. con. Studentranscond		COMMECT & LEST	450A	3	3			
2	Buriada selal academic	((E4/15401549) H4/ C40M4/	:		22.68	1.08			
<b>S</b>							*06		
K	on Sees up site	Network	CONNECT & TEST		2				
ន	53 OSPC opens/closes splices	Network	CONNECT & TEST		3 8			7.	
2	54 OSPC deloads one pair (E94/L88)	Mehrode	COMMECT & TEST	Y07+	3 ;				
*	75 Total Work Time 111 M 1 C 6. h 1	NDWIGH.	CONSTITUTION INCOME		8.6	00.6			
3 8	The Property of the Community of the Com	=((E52+E53+E54)*H52*G51)/152			139.32	9.72	:		
3	Hem/Description			:	:				
Ι	in the second se			Š	Worktimes (Min.				
	OUTSIDE PLANT CONSTRUCTION (OSPC) - Bridged Tap Sub				Elve				
<b>8</b>		Source	Description	300	1	Added towers		1	# Pairs
8	Underground Application		iondina.	200		Augu metall		# Bridged Taps	Deloaded/Long
8	60 OSPC sets up manholes	Maharat	TOTAL TOTAL					-	
61	61 OSPC open/dose solice	Mahamad	COMMECT & LEST	450X	20.02				-
3	62 OSPC removes birdood tan	YPAGE.	CONNECT & LEST	420x	8	i			
2	Total Work Time III to Dr. P. L.	Network	CONNECT & TEST	420X	4.50	4.50	-		
3 3	- DELL MORE INDI-	=((E60+E61+E62)*H59)/160			184.50	8	:		
3	Aerial/Buried Application							-	
2	65 OSPC sets up site	Network	CONNECT & TEST	420X	5		1	7	
8	66 OSPC open/close splice	Network	COMNECT & TEST	730	3 8			****	- ! :
67	67 OSPC removes bridged tap	Newark	CONNECT & TEST	25.5	3 5				
38	68 Total Work Time - Lit M-RT Suits con Burdad/April	ACTION OF SECTION AND ACTION	5	<b>Y</b>	00.	5°			
]	מוושר וויסר ליסיד רמים ליסיד מווים וויסיד מו	4(E03+E00+E0/)-H64)/165			249.00	00.6			

Unbundled Loop Modification

INPUTS\_TRAVEL Study Date: 11/2000

	A	В	၁	Q	ш	ш	9	I	
-	Tennessee								
7	2 Detailed Labor Worktimes				•		:		
က	3 Study Period: 2000-2002				:				:
4						÷			
2	Item/Description						Worktimes (Min.)		
	OUTSIDE PLANT CONSTRUCTION						# Pairs	# Paire	# Daire
ဖ	(OSPC)	Source	Description	JG / WS	Install	Description JG / WS Install Disconnect	Defoaded/Short	Deloaded/Lond	Deformed/Sublooms
	OSPC travels to load coil/ equipment					-		Biological	edonica management
7	7 sites.	Network	TRAVEL	420X	30.00	00 0	4	C	•

Input\_Loop+Mod Study Date: 11/2000

2       Adjustment for Loop Modification Worktimes - ULM - Short         3       Study Period: 2000-2002         4       5         6       7         6       7         10       Short Loops         11       Long Loops         14       5%         14       5%         15       Long Loops         16       Short Loops         17       Long Loops         18       Source: Interconnection Services		¥	В	ပ	D	E	<u>ц</u>
2 Adjustment for Loop Modification Worktimes - ULM - St 3 Study Period: 2000-2002  4 5 6 6 7 % of Loop and Modification Inquiries/Orders that arrive separately 8 9 7 % of Loop and Modification Inquiries/Orders that arrive separately 10 Short Loops 20% 11 14	-	Tennessee					
3 Study Period: 2000-2002  4 5 6 6 7 7 % of Loop and Modification Inquiries/Orders that arrive separately 8 9 10 8 hort Loops 20% 11	2	Adjustment fo	or Loop Modi	ification \	Norktime	s - ULM	- Short
4         5         6         6         7         8         9         10         11         12         13         14         15         16         17         16         17         18         Source: Interconnection Services	3	Study Period:	2000-2002	:			! ! ! !
5         6         7       % of Loop and Modification Inquiries/Orders that arrive separately         8       9         10       Short Loops         11       Long Loops         13       5%         14       5%         16       16         17       16         18       Source: Interconnection Services	4			:			
6       % of Loop and Modification Inquiries/Orders that arrive separately         8       9         10       Short Loops         11       Long Loops         13       5%         14       5%         15       16         16       17         18       Source: Interconnection Services	2				<del>-</del>		
7       % of Loop and Modification Inquiries/Orders that arrive separately         8       20         10       Short Loops         11       Long Loops         14       5%         16       15         17       16         17       17         18       Source: Interconnection Services	9		:	:	:		
8       9       10       11       12       13       14       15       16       17       18       Source: Interconnection Services	7	% of Loop and M	lodification Inq	uiries/Orde	rs that arri	ve separat	iel.
Short Loops Long Loops Interconnection Services	ھ					•	:
Short Loops Long Loops Interconnection Services	6		i i i i i i i i i i i i i i i i i i i	:			
Long Loops Interconnection Services	19		Short Loops		20%		
Long Loops	11			:		:	
	12		Long Loops	:	2%	1	
	13						
	14						:
	15			:	!		!
	16				:		
	17			:		1	
	18	Source:	Interconnection	Services	:		

	∢	<b>6</b>	ပ	۵	ш	ш	9	I
-	Tennessee	•						
7	2 Adjustment for BT/LC Inquiries in same SI	nt for BT/LC	3 Inquiries	in same SI				
က	3 Study Period: 2000-2002	od: 2000-2	000	:				
4					:		7	
2								
9		:			:			
7	:					:		:
8	8 % ULM-LC and ULM-BT requests come from CLEC at same time	and ULM-E	3T requests	come from	CLEC at sa	ame time		33%
6								
10	10 ULM-LC and ULM_BT requests are assumed to be separate orders with	IN ULM BT	requests ar	e assumed	to be separ	rate orders	with	%19
11	11 33% being ordered at the same time. This efficiency is captured	ordered at t	the same tin	ne. This effi	iciency is c	aptured		
12	12 in the ULM-LC and ULM-BT elements equally.	LC and UL	M-BT eleme	equally.		!		

L	A B	O	٥			9	F	-		¥	
Ŀ	Tennessee										1
7	Conditioning/xDSL Loop Demand				1	1	!	:	:		
				Source: Interconnect	<b></b>	i		!		:	
<u>~ </u>	Study Period: 2000-2002	:		Service							-
4 4			;	:		•	!				
Θ				1	Assumptions:	ris:					_
-					-	1			•		
<b>2</b>			:		Loop g 50% from	<ol> <li>Loop grown in all cases (Where there are to recasted loops in 2000) is 50% from EOY 2000 til EOY 2002; 25% thereafter</li> </ol>	es (wnere OY 2002: 2	mere are ro 5% thereaf	recasted loc ter	sı (000% uı sdo	
<u>ا</u>									ļ.		
Ξ					2. Percen	Percentage of loops that require conditioning is indicated in cell C6	at require	conditioning	is indicated	in cell C6	
2					<u>.</u>	وبيمالم مم فمفينة بقطبيه مزاكلا	9				
2 3	1 7 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				5 96 S	CL is subdivided as folio .95% of LICL are 2 wire	Ollows:				
5 5						-95% of 2 wire UCL are under 18 kilofeet	UCL are un	der 18 kilof	eet		,
16					•	-5% of 2 wire UCL are over 18 kilofeet	CL are ove	r 18 kilofee			·
1				:	-5%	-5% of UCL are 4 wire	9				
18	Conditioning Information For Cost Recovery	4	:		-5%	-5% of UCL are 4 wire	Ð				
19		Interconnection	10		•	-95% of 4 wire UCL are under 18 kilofeet	UCL are ur	der 18 kilof	eet		
8		Interconnection			•	-5% of 4 wire UCL are over 18 kilofeet	CL are ove	r 18 kilofee			
21	# of Conditions Reused by CLEC or BST	Interconnection	4								
22	# of Conditions Unrecovered	=D19-D20-D21	4		4. Each jo	4. Each job includes 2 CLEC loops plus 2 add1 loops that will be used by	LEC loops	plus 2 add7	loops that w	vill be used by	
23					CLEC in the	CLEC in the future.Assumptions:	nptions:				
24											
32	Loop and Conditioning Demand			:	otal Loops			:		With Loop	With Loop Conditioning
8	Service	Source	1999	2000	2001	2002		1999	2000	2001	2002
7 %	ISUH MO-609	Internancetion			5				!	•	•
2 8			5	-	ò	Ĉ.		⊃ : -	<b>&gt;</b>	-	4
8	610-2W ADSL	Interconnection	49	3312	4968	6210		0	662	994	1242
3											
32	611 - 4W HDSL	Interconnection	0	6	5	11		0	2	e	e .
8	645 - UCI	Interconnection	_	1390	2084	3606				_	
35	1	Interconnection		1321	1980	2476		For Refere	ance Only - I	For Reference Only - Not for Use in	
36	4 Wire UCL (5% of all UCL)	Interconnection		2	104	130	•	determining Cost	g Cost		
37	2W 11C   1 ace that 19 Vint 105 % of 101 C			:	<del></del>				:		
88	Wirel)	Interconnection		1254	1881	2352			75.4	376	440
39					3	3003	:	•		2	7
	4W UCL Less than 18 Kfeet (95% of all 4 wire										
용	(sdoo)	Interconnection	0	99	66	124			5	20	25
4			_								
42	Total forecasted inservice xDSL Capable located by year	#D40+D18+D12+D10+D28	•	7873	450	• 777			Š	,	,
4		-040.030.037.030.070	P.	4,042	0,0,1	7//0		•	876	1,404	1,754
43	Total Forecasted Orders for Loop	= (40)(02-):K42(020-): 42(020-)								6 6 8	
									636.013	89.000	436.363

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Manual Loop Makeup

BellSouth Telecommunications, Inc.

Index Study Date: 11/2000

Sheet Name: Index Index Index Index Investments Inves Recurring CALCULATOR INPUT FORM-CALCULATOR INPUT FORM-CALCULATOR INPUT FORM-CALCULATOR INPUT FORM-CALCULATOR INPUT FORM-CALCULATOR INPUT FORM-CALCULATOR INPUT FORM-WP100 WP100 WP100 Nonrecurring Worktimes INPUTS_MISC MISCELLANEOUS INPUTS	Description:  Manual Loop Makeup CALCULATOR INPUT FORM - CALCULATOR INPUT FORM - CALCULATOR INPUT FORM - CALCULATOR INPUT FORM - CALCULATOR INPUT FORM - CALCULATOR INPUT FORM - Detailed Labor Worktimes Detailed Labor Worktimes Detailed Labor Worktimes Detailed Labor Worktimes Detailed Labor Worktimes	Y - U					The second secon			ATERIAL/INVESTMENT DATA	RECURRING EXPENSES DATA	NONRECURRING EXPENSES DATA	RECURRING LABOR EXPENSES DATA	NONRECURRING LABOR TIMES							
Shee Investrations of the Investrations of the Investration of the	Tennessee Index Sheet Study Period: 2000-2002 Study Period: None Sheet Additives None Recurring Nonrecurring INPUTS SERVICE IIINPUTS ENGIN	L U						Description:	Manual Loop Makeup	CALCULATOR INPUT FORM - MA	CALCULATOR INPUT FORM - RE	CALCULATOR INPUT FORM - NO			Nonrecurring Worktimes	Detailed Labor Worktimes	Detailed Labor Worktimes	MISCELLANEOUS INPUTS			
see heet heet Period: 2000-2 INPUTS_S INPUTS_S	Tennessee Index Sheet Study Period: 20 INPU	S S			2002	:		1	ludex	Investments	dditives_Recurring	lives_Nonrecurring	Recurring Labor	Vonrecurring Labor	WP100	ERVICE INQUIRY	SENGINEERING	INPUTS MISC	•		
1.00 (0.11)		<b>6</b>	see	Sheet	Period: 2000-20			i i i i i i i i i i i i i i i i i i i			¥	Addit		<b>Z</b>		INPUTS_SI	INPUT			:	:

Investments Study Date: 11/2000

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-	;	CALCULATOR INPUT	OR INPU	_	FORM - MATERIAL/INVESTMENT DATA	IMENT DATA				
2	:		:	:						!
3		Instructions:	ii							
4		1. Use this worksheet	workshe	_	d material and/or in	to record material and/or investments to be input into the	ut into the			
2	:	Calculator calculations.	r calcula	ions.						
9		2. All amounts shown	nts show		unit (e.g., per call, i	are per unit (e.g., per call, per loop, per MOU).	1			
7		3. Input data, by Cost	a, by Cos		Element, leaving no blank lines. On next row	ines. On next row		:	:	
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6		4. All data on this form	on this fo	_	be cell-referenced	should be cell-referenced to study workpapers.		:		
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BellSouth Telecommunications, Inc.

Manual Loop Makeup

Additives\_Recurring Study Date: 11/2000

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	CALCULATO	CALCULATOR INPUT FORM - RECURRING EXPENSES DATA	PENSES DATA				
10							
110	- Contraction						
<u>,                                    </u>							
4	1. Use this w	1. Use this worksheet to record recurring non-	ecurring non-labor expenses to be input into the	be input into the	90		
2	Calculator	Calculator calculations.					
9	2. All amoun	2. All amounts shown are per unit (e.g., per cal	t (e.g., per call, per loop, per MOU).	on).		:	
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٥		CALCULAT	CALCULATOR INPUT FORM - NONRECURR	<b>NRECURRING EXPENSES DATA</b>	DATA			
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3		Instructions:						
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5		2. All amour	2. All amounts shown are per unit (e.g., per o	t (e.g., per call, per loop, per MOU).	MOU).			
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7		after last li	after last line of data, type END in Cost Ele	n Cost Element Column.				
æ		4. All data o	4. All data on this form should be cell-refere	cell-referenced to study workpapers.	rkpapers.	:		
6		5. Do NOT o	Do NOT change columns, headings, sheet name.	of name.	:			
10		6. Use colur	Use column D when cost element has a single nonrecurring cost; use columns E & F for elements with a first	ingle nonrecurrin	ig cost; use colui	mns E & F for el	lements with a t	irst
11		and addi	and additional nonrecurring cost; use columns G & H for elements with an initial and subsequent nonrecurring cost.	dumns G & H for	elements with an	initial and subs	sequent nonrec	urring cost.
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14			Nonrecurring		Nonrecurring	Nonrecurring	Nonrecurring	Nonrecurring
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2		6. Use colu	imns F & G	Use columns F & G when cost element has a single nonrecurring cost;	nrecurring co		use columns H, I, J, & K for elements with a first	r elements wit	h a first							
= 5		and add	Milonal nonr	and additional nonrecurring cost; use columns L. M. N.S. O for elements	& O for elem	ents with an in	with an initial and subsequent nonrecurring cost	quent nonrect	irring cost.		:	:				
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Ľ	7 CBCC/Acrd Toom socious 100 a Ci	2000	in in inches	4.	IIIS(dil	Disconnect	Addit Install	Disconnect	First Install	Disconnect	Addti Install	nect nect
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1	B CRSG/Acct Team screens LSR & SI	CRSG	SERVICE INQUIRY	SDWC	3.00	00.0	1.50	800	100%	%0	100%	8
	CRSG contacts CLEC acknowledging receipt		!					}		5	3	*
~']	9 and begins tracking procedures	CRSG	SERVICE INQUIRY	SDWC	4.00	000	00.00	000	100%	%	100%	%
	10 CRSG prepares SI transmittal to OSPE/SAC	CRSG	SERVICE INQUIRY		200	80	200	8	100%	Šè	200	\$ 6
	CRSG receives SI response, prepares LCSC						3	3	3	\$	\$	8
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اتا	15 Total Minutes (Worktimes * Probabilities)	1			31.90	000	13.45	3 6	24%	% 0	74%	Š
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-2	17 LOCAL CARRIER SERVICE CENTER (LCSC)	Source	Description	JG/WS	Install	Disconnect	Probability (Fallout)	:		l	:	
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5 Kem/Description	58.8%	58.8% INPUTS MISC			Work
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6 SERVICE ADVOCACY CENTER (SAC)	Source	Description	JG / WS	Install	Disconnect
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Manual Loop Makeup

INPUTS\_MISC Study Date: 11/2000

BellSouth Telecommunications, Inc.

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2	2 MISCELLANEOUS INPUTS	INPUTS		:		
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LINE SHARING SPLITTER - in the Central Office

Index Study Date: 11/2000

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Investments Study Date: 11/2000

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7		after last lin	ne of data,	type END	after last line of data, type END in Cost Element Column.	olumn.		
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6		5. Do NOT chi	ange colur	nns, headi	ngs, sheet name.	:		
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17		END						

BellSouth Telecommunications, Inc.

Additives\_Recurring Study Date: 11/2000

1 CALCULATOR INPUT FORM - RECURRING EXPENSES DATA  Instructions: 1. Use this worksheet to record nonrecurring labor times to be input into the Calculator calculations. 2. All amounts shown are per unit (e.g., per call, per loop, per MOU). 3. Input data, by Cost Element, leaving no blank lines. On next row after last line of data, type END in Cost Element Column. 4. All data on this form should be cell-referenced to study workpapers. 5. Do NOT change columns, headings, sheet name. 10 11 12 12 13 14 15 16 17 18 18 19 19 10 10 10 11 11 11 12 12 13 14 15 16 17 18 18 18 18 19 19 19 10 10 10 10 10 10 10 10 10 10 10 10 10		∢	8	C	<u>a</u>	ш	u_
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LINE SHARING SPLITTER - in the Central Office

Recurring Labor Study Date: 11/2000

BeilSouth Telecommunications, Inc.

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Tennessee Inputs for Norrecurring Costs	Study Period 2000 - 2002	:		Description	:		Line Sharing Splitter - per Splitter System 96-Line	Network	Engineering	- Lighteering	Engineering	Service Cruen	to some of the sound of the sound of	Evaluation	Proposition 1	Conjugation	Sarvice Order	1 Inc Sharlos Softbar - par I inc Active	Enoineering	Engineering (8 min x 35% failout)	Connect & Test	Connect & Test	LST - Engineering (15 min x 10%)	LST - Eng (8 min x 35% fallout x 10%)	LST - Correct & Test (# min x 10%)	LST - Connect & Test (60 min x 10%)	LST - Travel (30 mm x 10%)	Service Order	Line Sharing Spiffter per Subsequent	Engineering (8 min x 35% fallout)	Connect & Test	Connect & Test		$\rightarrow$	Connect & Test	LST - Connect & Test (# min x 10%)	LST - Connect & Test (60 min x 10%)	I ins Sharing Souther ner Subsequen	Connect & Test			Network	Engineering	Engineering	Section Order			Engineering	Engineering	Engineering	Service Order		Engineering (8 mm x 35% fallout)	Connect & Test	Connect & Test	Service Order		
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BellSouth TELRIC Calculator
Unbundled Network Cort Elements Summary Report
Tennessee
Base Case - Nonrecurring Only

	Anno Butter Case - Nonrecurring Only												
		Mon		Non Becurate		1		DIO DO		1		Difference	
	Cost Element	9	Į.	Additional Initial Subsequent Recurring	Subsequent	Recurring	First	Additional initial	Subsequent	Recurring	First	Non-Recurring Additional Initial	Subsequent
A 0 UNBUND	UNBUNDLED LOCAL LOOP												
	2.WIRE ASYMMETRICAL DIGITAL SUBSCRIBER LINE (ADSL) COMPATIBLE LOOP 2.Wire Aaymmetrical Digital Subscriber Line (ADSL) Compatible Loop (Nonecuming w.LMU)	·•	186 23	\$75.77			\$219.87	88 66\$			\$33.64	134 11	
A.66 2-Wire As	2-Wire Asymmetrical Digital Subscriber Line (ADSL) Compatible Loop (Nonrecurring w/o LMU)	· •• `	\$111 02	2612			\$120.79	\$43.31			11 6\$-	-\$1.37	
	<ul> <li>2-Wife AUSL Compatible Loop (Nonrecuring W. LMU) - Lesting</li> <li>2-Wife ADSL Compatible Loop (Nonrecuring W. LMU). Discound</li> </ul>		170 36	50.97			\$70.36	\$67.97			8 3	8 8	
	2-Wire ADSL Compatible Loop (Nonrecurring w/o LMU) - Testing	• •	20.36	\$67.97			\$70.36	567.97			5 5 5 5 6 7 7	8 8	
	2-Wire ADSL Compatible Loop (Nonrecurring w/o LMU). Disconnect		94 14	\$15.36			\$10105	\$13.41			-\$691	\$1.95	
	2-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL) COMPATIBLE LOOP												
	2-Wire High Bit Rafe Digital Subscriber Line (HDSL) Compatible Loop (Nonrecurring w/ LMU)	<u>.</u>	\$188 88	\$76.44			\$219.87	89 66\$			-\$30 99	-\$23 44	
A 7 6 2-Wire Hig	2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop (Nonrecurring w/o LMU)	-	11.02	<b>\$4194</b>	_		\$133.76	<b>54</b> 3 31			-\$22 74	-\$137	
	2-Wife HDSL Compatible Loop (Nonrecurring w/ LMU) - Testing	7 ;	899	8 8			99.98	\$84.30			8 8	8	
	2-Wire HDSL Compatible Loop (Nonrecurring on Living). Destina	, •	09 98	\$20.81 \$84.30			4 1 1 5 5 V	\$16 85			5 5	21.98	
	2-Wire HDSL Compatible Loop (Nonrecurring w/o LMU) - Disconnect		\$94 14	\$15.36			\$10105	\$13.41			8 8 8 2 8 2 8 3 8 3	\$195	
	4-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL) COMPATIBLE LOOP				., .								
ABS 4-Wire High	4-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop (Norvecuring w/ LMU) 4-Wire High Bit Bate Digital Subscriber Line (HDSL) Compatible (1994) Marganisms and 1441)	2 3	\$201.84	\$89.40			\$284.20	\$153.83			-\$82.36	\$64.43	
•	4-Wire HDSL Compatible Loop (Nonrecurring W. LMU) - Testing		27.64	\$125.25			21 651 42	\$107.64 \$7.67			£7007	-\$52 /3 \$77 69	_
	4-Wire HDSL Compatible Loop (Nonrecurring w/ LMU) - Disconnect		17 67	\$24.85			\$180.85	\$76.61			563 18	-\$51.76	
	4-Wire HDSL Compatible Loop (Nonrecurring w/o LMU) - Testing	- <del></del>	27 64	\$125.25			\$103 81	\$101.42			\$23.83	\$23.83	
	4-Wire HDSL Compatible Loop (Nontecurring w/o LMU) · Disconnect		69 66	\$19.29			\$106.73	\$17.30			\$7 O4	\$1.99	
	2-WIRE COPPER LOOP												
A 13 8 2-Wire Co	2-Wire Copper Loop - short (Nonrecurring w/ LMU)	<u>.</u>	87.34	\$74 90			\$218.34	\$98.35			-\$31.00	-\$23.45	
	2-Wire Copper Loop - short (Nonrecurring w/o LMU)	<u>~</u>	09 48	<b>\$4</b> 0 <b>4</b> 1			\$119.28	\$41.78			-\$9 78	-\$137	
A 13.10 2-Wire Co	2-Wire Copper Loop - long (Nonrecurring w/ LMU)	<u>.</u>	87.34	\$74 90			\$286.20	\$163.82			-\$98 86	-\$88 92	
A 13 F1 2-Wire Co.	A. 13 F1 - Z-Wife Copper Loop - Iong (Norlecuming We LMU) A 13 R08-2 Wire Connect Loop - short (Norsecuming W. LMT) - Testing	. ·	99 48	540 41			\$187.12	\$107.25			\$77.65	-\$66 84	
A 13 899 2-Wire Co.	A 13 899 2-Wire Copper Loop - short (Normecuring w. L.M.) - Testing	<b>~</b> ;	11 76	\$00 /3			41074	C/ /OF		•	8 8	8 8	
A 13 998 2-Wire Co.	A. 13.998 2-Wire Copper Loop - short (Nonrecurring w/o LMU) - Testing	. "	70.7	\$67.75			\$70.14	\$67.75			, S	8 8	
A. 13 999 2-Wire Co.	A 13 999 2-Wire Copper Loop - short (Nonrecurring w/o LMU) - Disconnect		94 14	\$15.36			\$101.05	\$1341			5 9	\$195	_
A 13.109 2-Wire Co.	13.109 2-Wire Copper Loop - long (Nonrecurring w/ LMU) - Testing		70 14	\$67.75			\$70.14	\$67.75			00 03	00 03	
A 13 109 2-Wire Co	A 13 109 2-Wire Copper Loop - long (Nonrecurring w/ LMU) - Disconnect	<u>.</u>	11 76	\$20.81			\$122.85	\$20.81			-\$1109	8 8	
A 13.119 Z-Wire Co	A 13 119 Z-Wire Copper Loop - long (Nonrecurring w/o LMU) - festing		\$70.14	\$67.75			\$70.14	\$67.75			8	00 S	
3 all 4-7 all 51 V	pper Loop - long (Norrecurring Wo LMU) - Lisconnect	•	4	\$15.36			\$105.23	\$15.36			\$- -	00 03	
	4-WIRE COPPER LOOP												
A 14.9 4-Wire Co.	4-Wire Copper Loop - short (Nonrecurring W LMU) 4-Wire Convert on - abort (Nonrecurring Wo LM!)	3 3	5200.31	\$87.86			\$330.70	\$208.32		7, 7	\$130.39	\$120.46	
	4-Wire Copper Loop - long (Nonrecurring w/ LMU)	. S	96.3	87.88			\$330.70	\$208.32			200	£120.46	_
A.14.11 4-Wire Cop	4-Wire Capper Loop - long (Nonrecurring w/a LMU)	-	\$122.45	\$53.37			\$231.62	\$151.75		7	\$109 17	\$98.38	_
A 14 898 4-Wire Co.	14.898 4-Wire Copper Loop - short (Nonrecurring w/ LMU) - Testing	<u>.</u>	02.82	\$100.43			\$103.81	\$101.42			66 O <b>\$</b> -	66 O\$:	
A. 14.899 4-Wire Co.	A. 14.899 4-Wire Copper Loop - short (Nonrecurring w/ LMU) - Disconnect	<u>ت</u>	17.67	\$24.85			\$128 99	\$24.85			-\$1132	00 0\$	
A 14.998 4-Wire Co.	14 998 4-Wire Copper Loop - short (Nonrecurring wio LMU) - Testing	<u>.</u>	02.82	\$100.43			\$103.81	\$101.42			86 O.	56 05	
14 399 4-Wire Co	14.959 4-Wife Copper Loop - short (Nortiecuming Wife LMU) - Disconnect 14.106 4-Wife Copper Loop - Inna (Nortecuming w/ 1.411) - Teating	٠٠ <u> </u>	9969	\$19.29			511101	\$19.29			-\$1132	88	
1. 14. 109 4-Wire Co.	14.109 4-Wire Copper Loop - long (Nonrecurring w/ LMU) - Disconnect		\$117.67	\$24.85			\$128.99	\$24.85			. 140 95 11 37	3 S	
4.14.119 4-Wire Col	14.119 4-Wire Copper Loop - long (Nonrecurring w/o LMU) - Testing		02.82	\$100.43			\$103.81	\$101.42			86	66.03	
4.14.119 4-Wire Co.	14.119.4-Wire Copper Loop - long (Nonrecurring w/o LMIJ) - Disconnect	•	69 66	\$19.29			\$111.01	\$19.29			-\$1132	00:05	
					•				•				

BellSouth TELRIC Calculator
Unbundled Network Cost Elements Summary Report
Tennessee
Base Case - Nonrecurring Only

		New				PRO					Difference		
	Non	Non-Recurring	_	Non		Non-Recurring	curring		Non		Non-Re	Non-Recurring	
Cost Element	Recurring First	Additional Initial Subsequent Recurring	Subsequent	Recurring	First	Additional	Initial	Subsequent	Recurring	First	Additional	Fritial	Subsequent
LOOP CONDITIONING Unbundied Loop Meditication - Load Coil / Equipment Romoval - long Unbundied Lonp Medification - Additive	\$321 99	6 \$12.36			\$98.87	\$22.41 \$98.87			Changed fror	m First and -\$86 51	Changed from First and Additional to Nonrecurring structure . \$86.51	Nonrecurrin	structure .
OOP MAKE-UP Manual Loop Make-up win Fucility Reservation Number Manual Loop Make-up wi Facility Reservation Number	\$74.46 \$77.18			\$99 61 \$105 06					-\$25 15 -\$27.88				
LINE SHARING SPLITTER IN THE CENTRAL OFFICE the Sharing Splitter are of Splitter Spriser Bet, in e. Capacidy in the Central Office sharing Splitter, are Splitter spriser 24 thro Capacidy in the Central Office, one Sharing Splitter in the Central Office of Splitter in the Central Office (Fel LSOD)	\$371 63 \$371 63 \$108 66				\$343.31 \$343.31 \$73.15	\$15.63 \$15.63 \$15.63			Changed from Changed from Changed from	m First and m First and m First and	Changed from First and Additional to Non-couring structure. Changed from First and Additional to Nonrecuring structure. Changed from First and Additional to Nonrecuring structure.	Nonecurin Nonecurin	structure. 1 structure 1 structure.
Line Sharing - per CLECIDLEC Dwied Splitter in the Central Office (per organisme) and proup of these (48 pairs))	\$54.40		69 71 8						New			ž	No.
Line Sharing - per CLEC DLEC Owned Splitter in the Cernal Office (per order for J.4.7). Line Sharing Splitter - per Splitter System 96-Line Capacity in the Central Office - Disconnect	5349 37		00 010		\$332.83	\$18.26			Changed from	m First and	Changed from First and Additional to Nonrecuring structure.	Nonrecurring	structure.
Line Sharing Splitter per Splitter System 24. Line Capacity in the Central Office - Disconnect line Sharing Splitter per Splitter System 24. Line Capacity in the Central Office (per LSOD) - Disconnect	\$349.37 \$82.12				\$332 83 \$85 45	\$18.26			Changed from	m First and m First and	Changed from First and Additional to Nomecuring structure Changed from First and Additional to Nomecuring structure	Nonrecurrin Nonrecurrin	structure structure
Line Statuty, per CLEC/DLEC Owned Splitter in the Central Office (per occurrence of each group of 24 innex (48 pairs)). Disconnect	\$10.59								New				
Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per order for J.4.7) - Disconnect			\$18.26									ž	New
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Elements Affected	A.17.4 A.17.2	J.3.3, J.3.4	All Install & Disconnect All Install All Additional Install & Disconnect A.6.5, A.7.5, A.8.5, A.13.8, A.14.8, A.13.10, A.14.10	J.4.1, J.4.199, J.4.2, J.4.299 J.4.1, J.4.199, J.4.2, J.4.299, J.4.6, J.4.699	Elements Affected	All disconnect A.7.6 A.8.598, A.8.698, A.14.898, A.14.998, A.14.1098, A.14.1198	A.8.5, A.8.6, A.14.8, A.14.9, A.13.10, A.13.11, A.14.10, A.14.11 A.14.8, A.14.9, A.13.10, A.13.11, A.14.10, A.14.11	Elements Affected	J.4.7, J.4.799 J.4.8, J.4.899
Description Of Work-Time Updates	Revised assumption of CLEC loops requiring conditioning from 40% to 20%; Revised calculation regarding number of CLEC loops unloaded on a single job from 1 to 4 Restructured rate structure for ULM Long - (A.17.2) - Install Only vs First/Additional in previous filing; average 2 loops at one time and 3.15 load coils	Revised Service Advocacy Center (SAC) work times; incorporated probability of spare facilities; removed LFACS input worktimes; reduced reservation work time	Revised Work Management Center (WMC) work time from 15 min to 2 min; install only Revised Service Advocacy Center (SAC) work times; incorporated probability of spare facilities; removed LFACS input worktimes; reduced reservation work time Updated UNEC work times for First Disconnect/Additional Install based on SME review of order design Updated Complex Resale Support Group (CRSG) work time for Additional Installation from 12.13 min to 13.45 min	Changed Job Function Code (JFC) from 2730 to JG56 Changed rate structure from First and Additional to Nonrecurring, there is no incremental cost for additional splitters on the same order. Changed work group from Local Carrier Service Center (LCSC) to Circuit Capacity Management (CCM) and updated worktimes.	Description Of Corrections	Corrected disconnect formula for JFC 431X 100%; was 60% assuming 40% was in testing Corrected formula for 411X; was multipled against a 4-wire factor rather than a 2-wire factor Corrected testing elements for JFC 4AXX to add proper work time row to formula	Removed testing from install for JFC 411X Removed testing from install for JFC 4AXX	Elements Added	Line Sharing - per CLEC/DLEC Owned Splitter in the Central Office (per occurrence of each group of 24 lines (48 pairs)) Line Sharing - per CLEC/DLEC Owned Splitter in the Cenral Office (per order for J.4.7)
Filename	TN-MOD.xis	TN-LMU.xis	TN-XDSL.xls	<b>TNLineSh.xls</b>	Filename	TN-XDSL.xls		Filename	TNLineSh.xls

## <u>AFFIDAVIT</u>

STATE OF: Georgia COUNTY OF: Fulton

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared D. Daonne Caldwell –Director – Finance, BellSouth Telecommunications, Inc., who, being by me first duly sworn deposed and said that:

D. Daonne Caldwell

D. Daonne Coldwell

Sworn to and subscribed before me on /1/10/00

NOTARY/BUBLIC

